

P-474

NASA Technical Memorandum 87690, Part 2

1984 DIRECT STRIKE LIGHTNING DATA

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and

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National Aeronautics and
Space Administration

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Hampton, Virginia 23665

114

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*Part 1 and Part 3 published under separate cover.

F-106 LIGHTNING/ 84-027

LEC1 RUN NO. 1

N.001

B_w T/s

-900 600 300 0 300 600 900

.8

0

.8

1.6

2.4

3.2

4.0

4.8

MICROSECONDS

21:26:37.7
CHANNEL NO. 1.1

ORIGINAL PAGE 13
OF POOR QUALITY

F-106 LIGHTNING/ 84-027

1 FC 1 RUN NO. 1

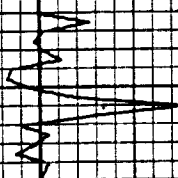
N.001

B_{WT}

T/s

21:29:37.7
CHANNEL NO. 1.2

MICROSECONDS



F-106 LIGHTNING/ 84-027

LEC 2 RUN NO. 1

N.001

D_t A_t/m^2

21:26:37.7
CHANNEL NO. 2.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-027

IFC 2 RUN NO. 1

N.001

i A/s

21:26:37.7
CHANNEL NO. 2.1

MICROSECONDS

24 X 10⁴

F-106 LIGHTNING/ 84-027

1 EC 2 RUN NO. 1

N.001

\dot{B}_1 T/s

1800
1200
600
0
600
1200
1800

-1.6

-1.4

-1.2

0

.2

.4

.6

.8

MICROSECONDS

21:26:37.1

CHANNEL NO. 2.2

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-027

IEC 3 RUN NO. 1

N.001

\bar{D}_{wr} A/m²

21:26:37.7
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-027

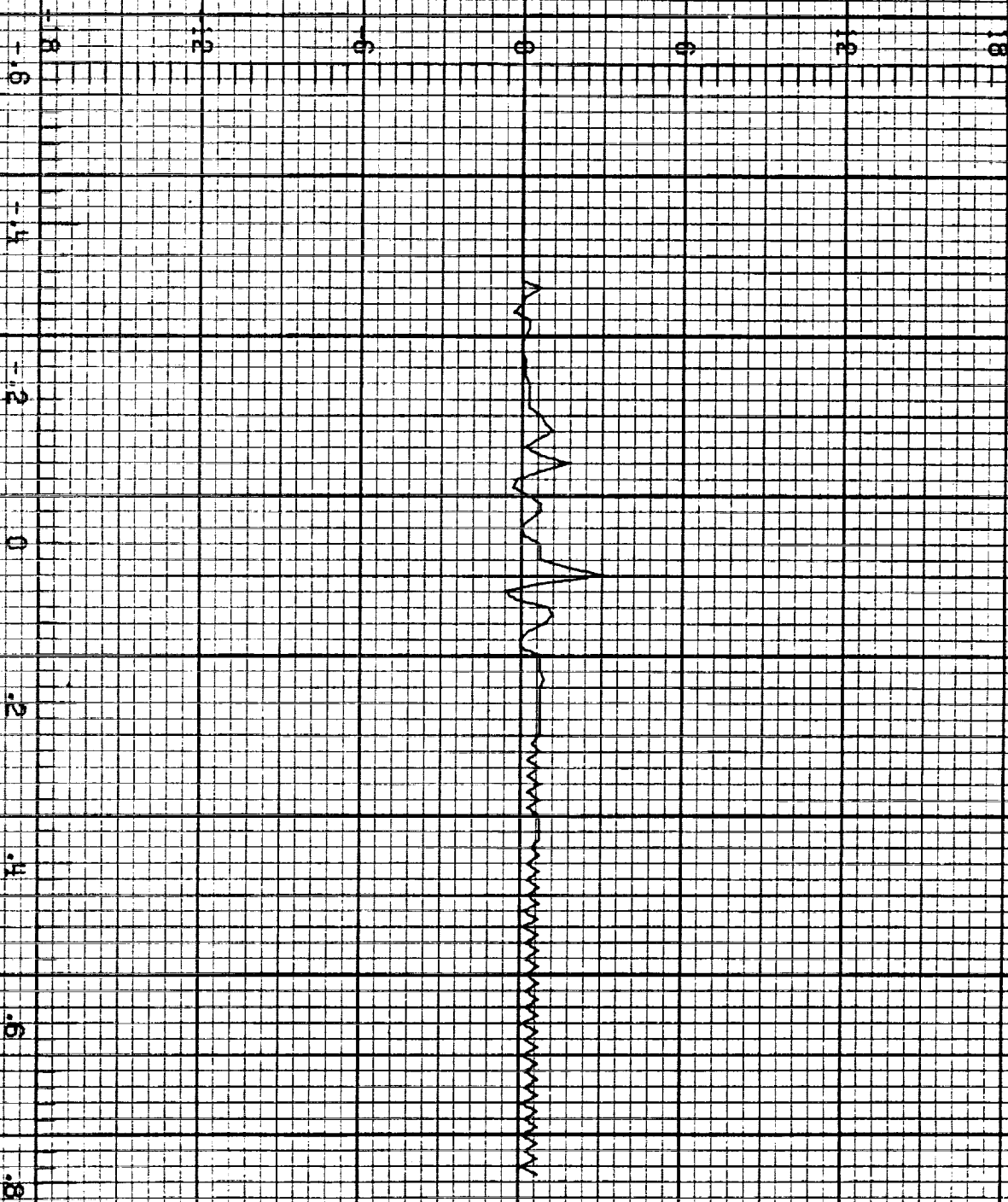
LECB RUN NO. 1

N.001

\dot{D}_{wl} A/m²

21:25:37.7
CHANNEL NO. 3.1

MICROSECONDS



ORIGINAL PAGE IS
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F=106 LIGHTNING/ 84-027

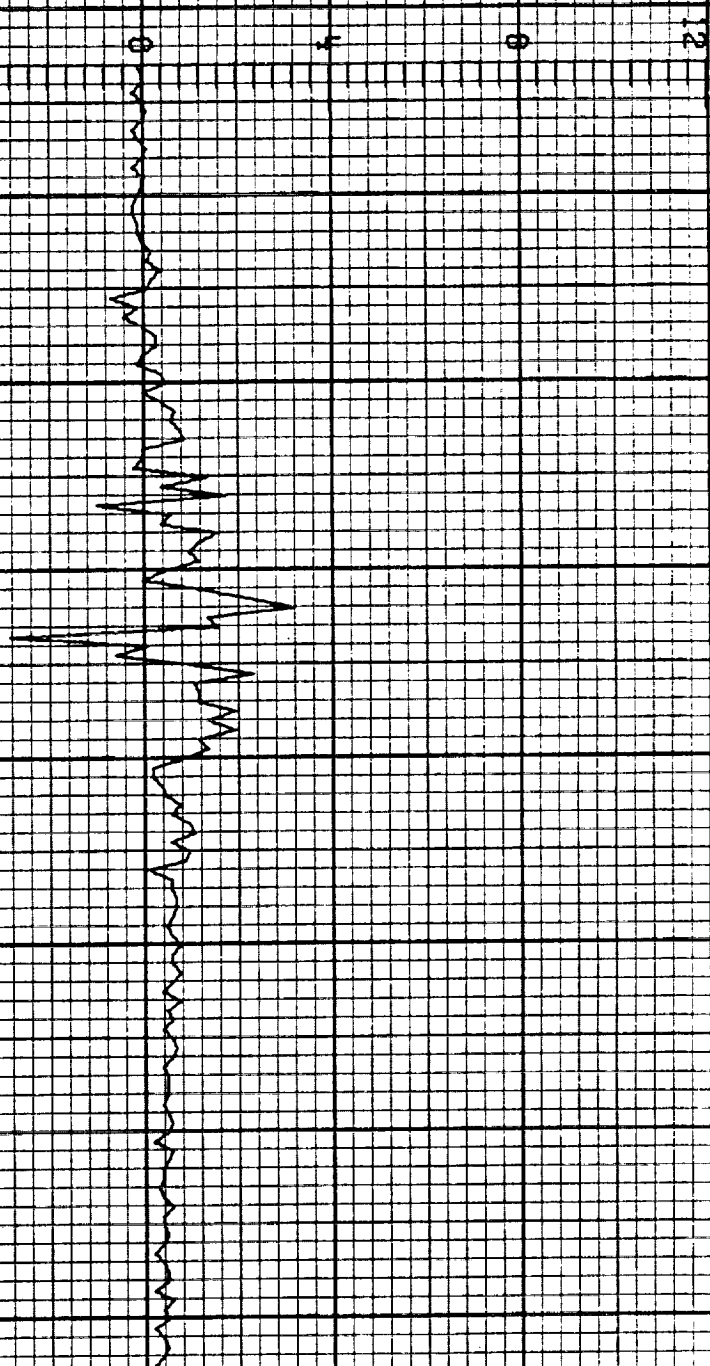
ECB RUN NO. 1

N.001

D_r A/m²

21:25:37.7
CHANNEL NO. 3.2

MICROSECONDS



F=106 LIGHTNING/ 84-027

LEC 4 RUN NO. 1

N.001

V_{fo} V

60 40 20 0 20 40 60

-.6

-.4

-.2

0

.2

.4

.6

.8

21:26:37.7
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-027

IEC4 RUN NO. 1

N.001

I_n A

21:23:37.7
CHANNEL NO. 4.1

MICROSECONDS

5×10^3

F-106 LIGHTNING/ 84-027

IFC 4 RUN NO. 1

N.001

I_t A

2 x 10³

21:26:37.7
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-027

FC1 RUN NO. 2

6.002

B_v T/s

21:34:56.8
CHANNEL NO. 1.1

1.6
2.4
3.2
4.0
4.8
MICROSECONDS

F-106 LIGHTNING/ 84-027

1 FC 1 RUN NO. 2

3.002

B_{wr}

T/s

-3000

-2000

-1000

0

1000

2000

.8

0

.8

1.6

2.4

3.2

4.0

4.8

MICROSECONDS

21:34:56.6
CHANNEL NO. 1.2

F-106 LIGHTNING/ 84-027

FC2 RUN NO. 2

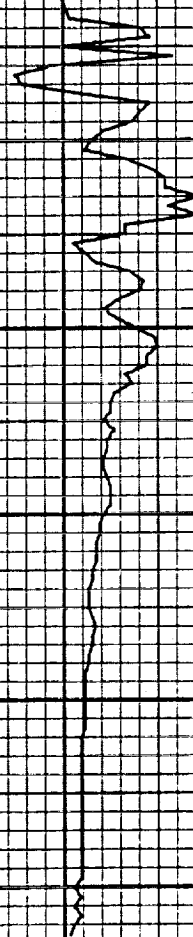
6.002

\dot{D}_1 A/m²

21:34:56.6
CHANNEL NO. 2.0

ORIGINAL PAGE IS
OF POOR QUALITY

MICROSECONDS



F-108 LIGHTNING/ 84-027

1 EC2 RUN NO. 2

6.002

\dot{I} A/s

24 x 10¹⁰

21:34:56.8
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-027

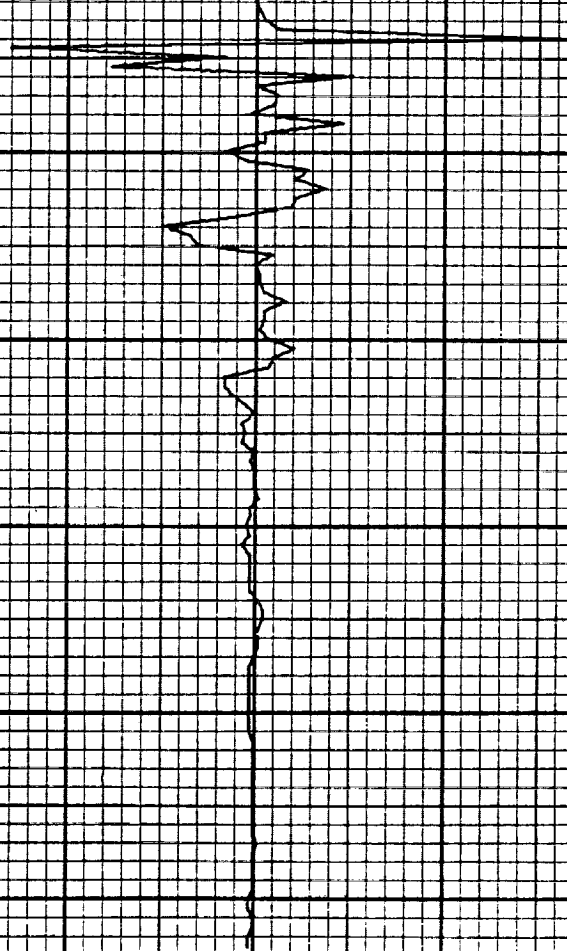
LEC 2 RUN NO. 2

5.002

\dot{B}_1 T/s

21:34:56.6
CHANNEL NO. 2.2

MICROSECONDS



F=106 LIGHTNING/ 84-027

LEF 3 RUN NO. 2

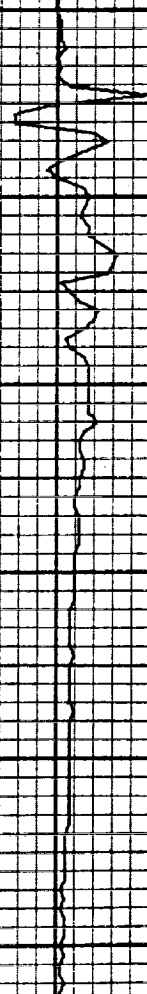
6.002

\bar{D}_{wr} A/m²

-18 -16 -14 -12 -10 -8 -6 -4 -2 0

MICROSECONDS

-1 -2 -3 -4 -5 -6 -7 -8 -9 -10



21:34:56.8
CHANNEL NO. 3.0

ORIGINAL PAGE IS
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F=106 LIGHTNING/ 84-027

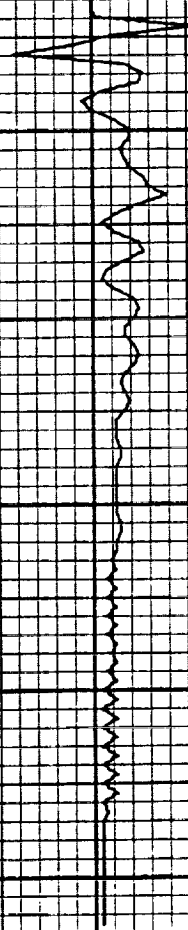
EC 3 RUN NO. 2

5.002

\hat{D}_{w1} A/m^2

21:34:55.6
CHANNEL NO. 3.1

MICROSECONDS



F-106 LIGHTNING/ 84-027

IFC3 RUN NO. 2

6.002

\dot{D}_r A/m²

21:34:56.6
CHANNEL NO. 3.2

MICROSECONDS

-1.2
-1.0
-0.8
-0.6
-0.4
-0.2
0
.2
.4
.6
.8
1.0

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-027

IFC4 RUN NO. 2

6.002

V_{ro}

V

21:34:56.6
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-027

LECH RUN NO. 2

6.002

T_n A

9×10^8

21:34:56.6
CHANNEL NO. 4.1

MICROSECONDS

-9
-4
-2
0
.2
.4
.6
.8
1.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-027

IEC# RUN NO. 2

6.002

I_t A

21:34:56.8
CHANNEL NO. 4.2

MICROSECONDS

9 x 10⁹

F-106 LIGHTNING/ 84-027

LFC 1 RUN NO. 3

6.004

B_w

T/s

-900

600

300

300

600

900

-0.8

0

.8

1.6

2.4

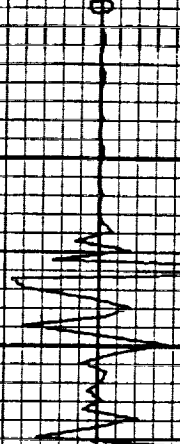
3.2

4.0

4.8

MICROSECONDS

21:43:46.9
CHANNEL NO. 1.1



ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-027

LEC 1 RUN NO. 3

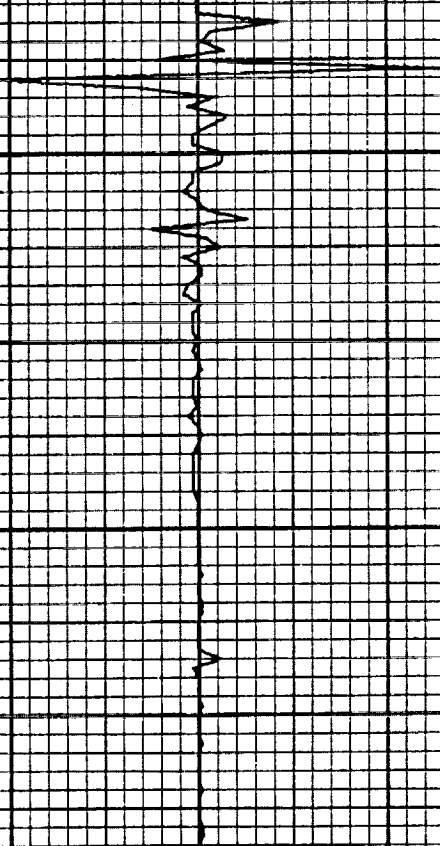
5.004

B_v

T/s

21:43:46.9
CHANNEL NO. 1.2

MICROSECONDS



F-106 LIGHTNING/ 84-027

LEC 2 RUN NO. 3

5.004

D_t A/m²

-3 -2 -1 0 1 2 3

-1.4
-1.2

0

.2

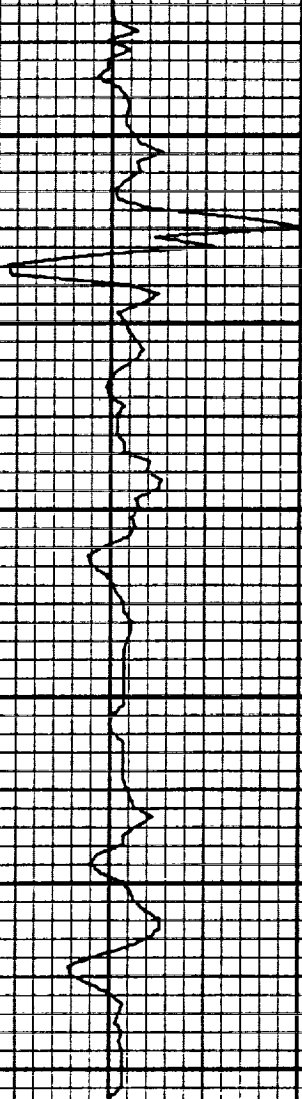
.4

.6

.8

1.0

MICROSECONDS



21:43:46.9
CHANNEL NO. 2.0

ORIGINAL PAGE IS
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E-106 LIGHTNING/ 84-027

1 FC 2 RUN NO. 3

6.004

\dot{t} A/s

24 X 10¹⁰

21:13:46.9
CHANNEL NO. 2.1

MICROSECONDS

F-106 LIGHTNING/ 84-027

LEC 2 RUN NO. 3

5.004

\bar{B}_1 \bar{T}/s

1800
1600
1400
1200
1000
800
600
400
200
0

-.4

-.2

0

.2

.4

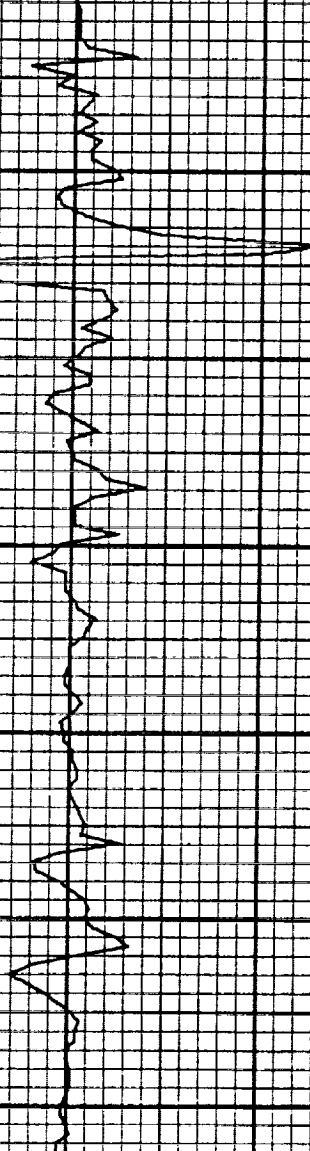
.6

.8

1.0

MICROSECONDS

21:43:46.9
CHANNEL NO. 2.2



F=106 LIGHTNING/ 84-027

LEC 3 RUN NO. 3

5.004

\dot{D}_{nr} A/m²

21:43:46.9
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-027

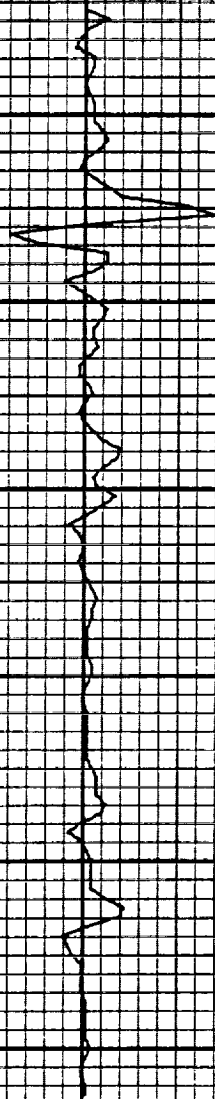
LEC3 RUN NO. 3

3.004

\hat{D}_{w1} A/m²

21:43:46.9
CHANNEL NO. 3.1

MICROSECONDS



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F-106 LIGHTNING/ 84-027

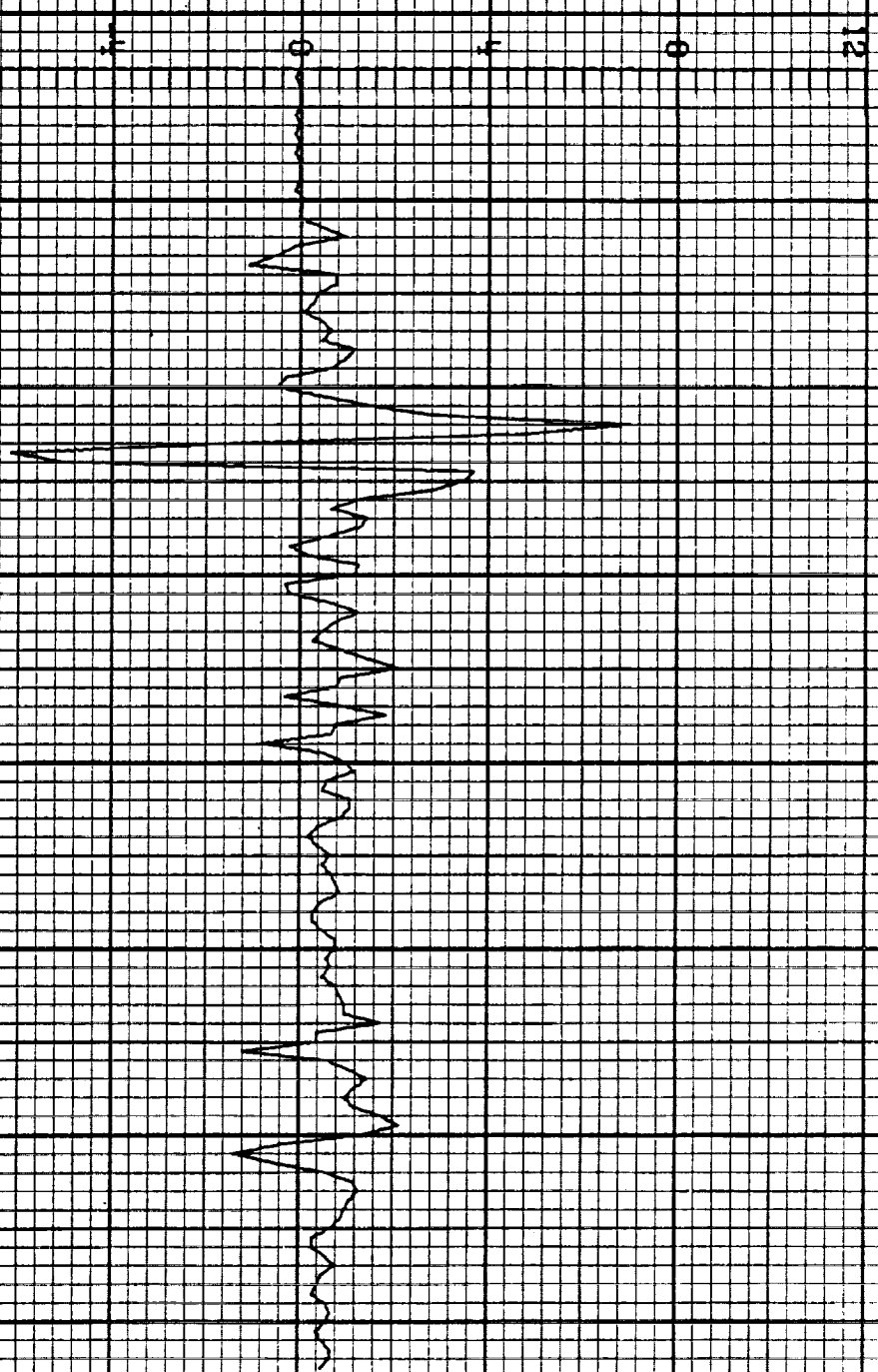
LEC3 RUN NO. 3

6.004

D_r A/m^2

21:43:46.9
CHANNEL NO. 3.2

MICROSECONDS



F-106 LIGHTNING/ 84-027

LEC 4 RUN NO. 3

6.004

V_{ro} V

60 40 20 0 20 40 60

-1.2

0

.2

.4

.6

.8

1.0

MICROSECONDS

21:43:46.9
CHANNEL NO. 4.6

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-027

LEC4 RUN NO. 3

5.004

I_n A

21:43:46.9
CHANNEL NO. 4.1

MICROSECONDS

2×10^8

F-106 LIGHTNING/ 84-027

LEG 4 RUN NO. 3

S.004

I_t A

21:43:46.9
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

LEC 2 RUN NO. 1

S.001

\dot{D}_t A/m²

16:45:29.3
CHANNEL NO. 2.D

MICROSECONDS

F-106 LIGHTNING/ 84-028

IFC 2 RUN NO. 1

5.001

\dot{I} A/s

24×10^{16}

-24

-16

-8

0

8

16

24

32

40

48

56

64

72

80

88

96

104

112

120

128

136

144

152

160

168

176

MICROSECONDS

.2

.4

.6

.8

1.0

1.2

1.4

1.6

1.8

2.0

2.2

2.4

2.6

2.8

3.0

3.2

16:45:29.3
CHANNEL NO. 2.1

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

FC2 RUN NO. 1

3.001

\hat{B}_1 T/s

18:45:29.3
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-028

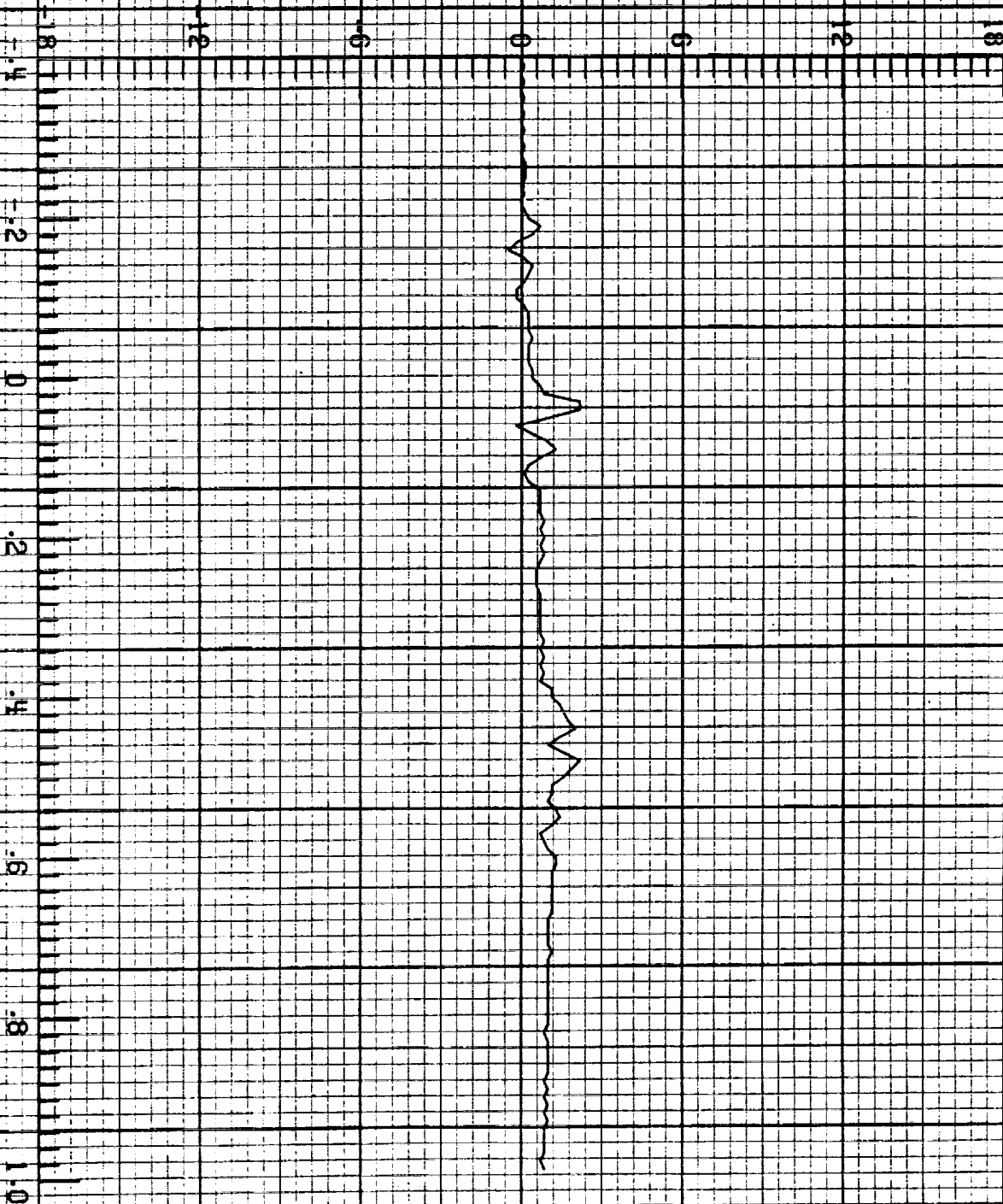
LEC 3 RUN NO. 1

3.001

\dot{D}_{wr} A/m²

16:45:29.3
CHANNEL NO. 3.0

MICROSECONDS



F-106 LIGHTNING/ 84-028

LEC 3 RUN NO. 1

6.001

\dot{D}_{wl} A/m²

16:45:29.3
CHANNEL NO. 3.1

MICROSECONDS

F=106 LIGHTNING/ 84-028

IFC3 RUN NO. 1

5.001

D_r A/m²

16:45:29.3
CHANNEL NO. 8.2

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 1

8.001

TP 100

V_w

V

18:45:29.3
CHANNEL NO. 4.0

MICROSECONDS

E-106 LIGHTNING/ 84-028

FC 4 RUN NO. 1

5.001

TP 101

V_{fb} V

16:45:29.3
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 1

5.001

TP 102

V_{fe} V

18:45:29.3
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-028

1 EC 2 RUN NO. 2

6.002

D_t A/m²

16:51:55.2
CHANNEL NO. 2.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-028

LEC 2 RUN NO. 2

6.002

I A/s

24 x 10¹⁰

18:51:55.2
CHANNEL NO. 2.1

MICROSECONDS

F-106 LIGHTNING/ 84-028

1 EC 2 RUN NO. 2

3.002

\dot{B}_1 T/s

1800 1200 600 0 -600 -1200 -1800

.4

.2

0

.2

.4

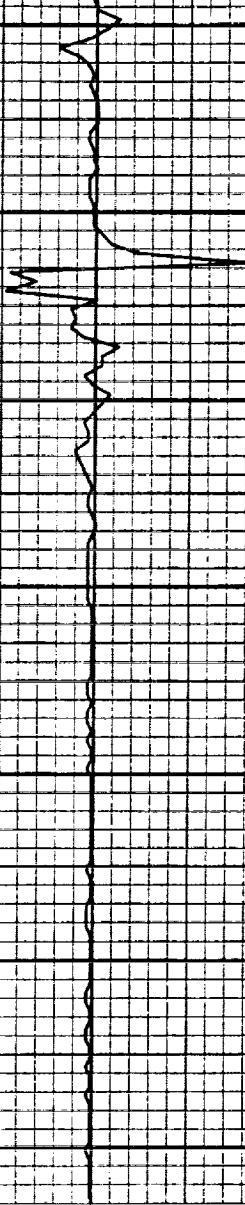
.6

.8

1.0

MICROSECONDS

16:51:55.2
CHANNEL NO. 2.2



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F-106 LIGHTNING/ 84-028

LEC 3 RUN NO. 2

5.002

\dot{D}_{wr} A/m²

16:51:55.2
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-028

1 FC 3 RUN NO. 2

6.002

\hat{D}_{wl} A/m²

-18 -16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18

16:51:55.2
CHANNEL NO. 3.1

MICROSECONDS

-1.8 -1.6 -1.4 -1.2 -1.0 -0.8 -0.6 -0.4 -0.2 0 .2 .4 .6 .8 1.0

F-106 LIGHTNING/ 84-028

LFC3 RUN NO. 2

S.002

\dot{D}_f A/m²

16:51:55.2
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-028

1 FC4 RUN NO. 2

5.002

TP 100

V_w

V

16:51:55.2
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
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F=106 LIGHTNING/ 84-028

1 FC 4 RUN NO. 2

5.002

TP 101

V_{fb} V

18:51:55.2
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-028

IFC 4 RUN NO. 2

5.002

TP 102

V_{TC} V

16:51:55.2
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

LEC 2 RUN NO. 3

5.003

\dot{D}_t A/m²

17:11:23.1
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-028

LEC 2 RUN NO. 3

6.003

I A/s

17:11:23.1
CHANNEL NO. 2.1

MICROSECONDS

24×10^{10}

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

1 FC 2 RUN NO. 3

S.003

D_1 T/s

17:11:23.1
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-028

LFC3 RUN NO. 3

5.003

\dot{D}_{wr} A/m²

17:11:23.1
CHANNEL NO. 3.0

MICROSECONDS

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

1 EC 3 RUN NO. 3

6.003

\dot{D}_{wl} A/m²

17:11:23.1
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-028

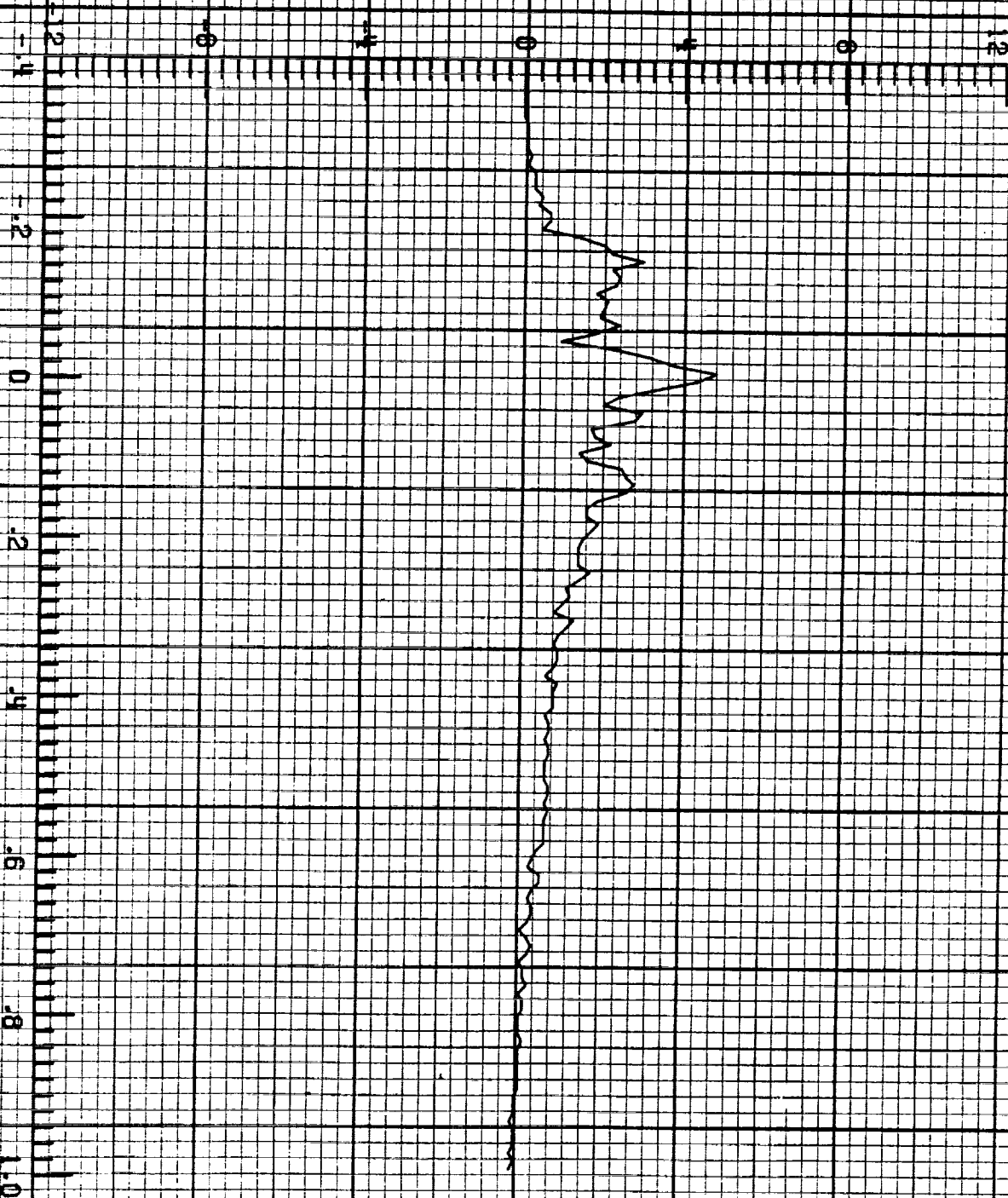
LEF 3 RUN NO. 3

5.003

D_r A/m²

17:11:23.1
CHANNEL NO. 3.2

MICROSECONDS



F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 3

5.003

TP 100

V_W V

17:11:23.1
CHANNEL NO. 4.0

MICROSECONDS

E-106 LIGHTNING/ 84-028

1 EC 4 RUN NO. 3

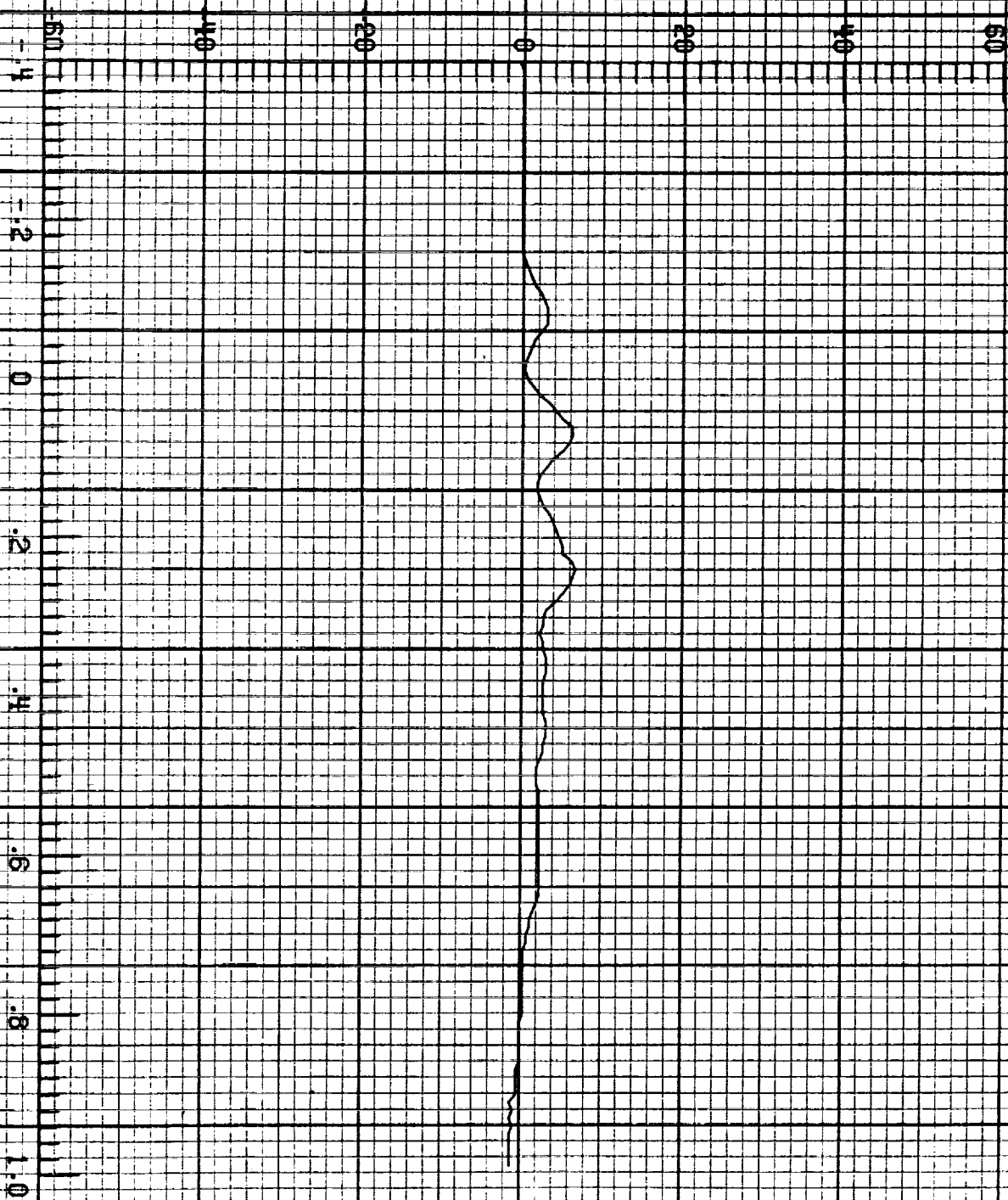
8.003

TP 101

V_{fb} V

17:11:23.1
CHANNEL NO. 4.1

MICROSECONDS



ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 3

TP 102

6.003

V_{fc}

V

17:11:23.1
CHANNEL NO. 4.2

MICROSECONDS

E-106 LIGHTNING/ 84-028

LEC 1 RUN NO. 4

6.005

I_r A

18 x 10³

-0.8

0

.8

1.6

2.4

3.2

4.0

4.8

MICROSECONDS

17:22:27.7

CHANNEL NO. 1.1

ORIGINAL PAGE IS
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F=106 LIGHTNING/ 84-028

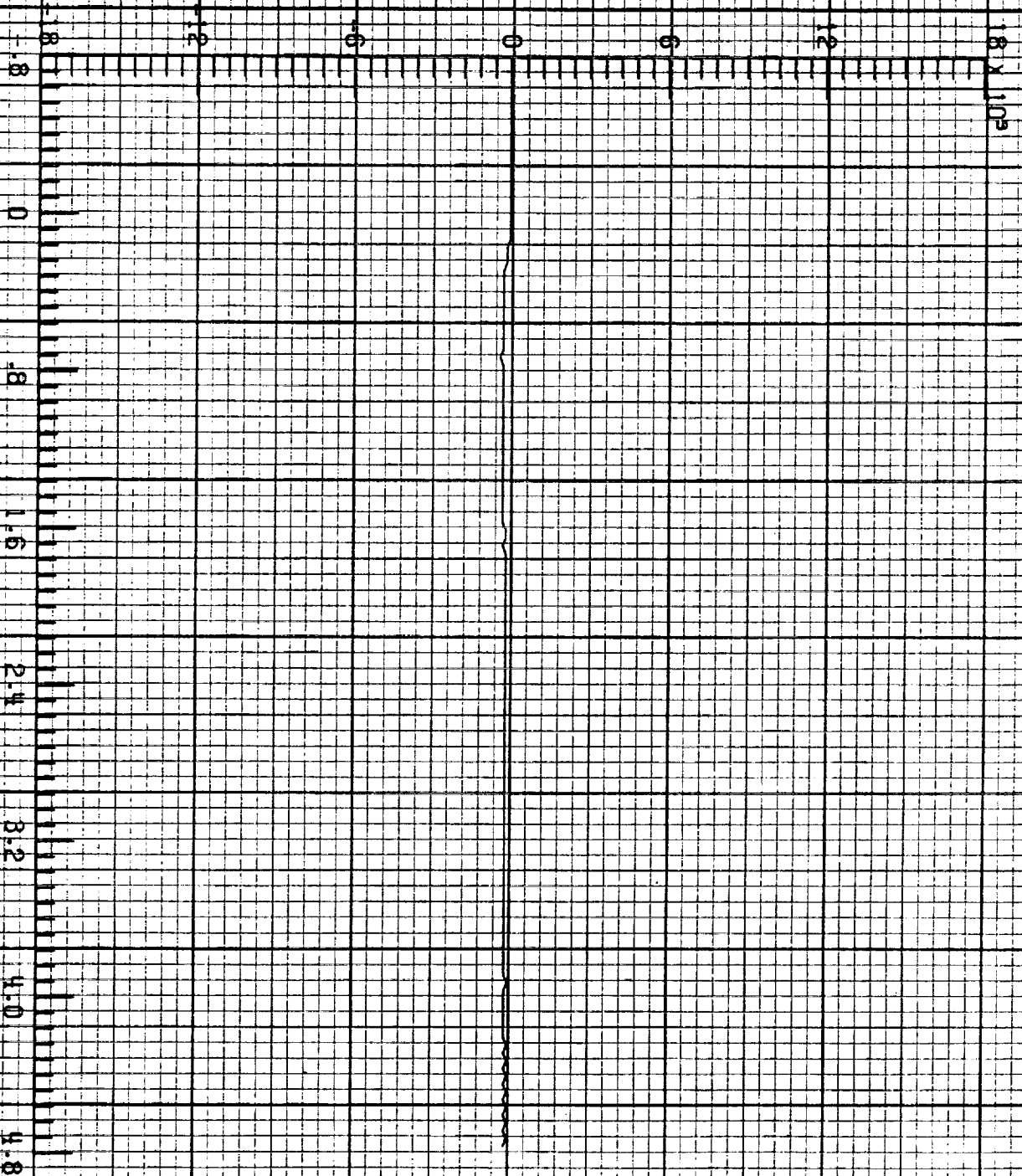
LEC 1 RUN NO. 4

8.005

T_t A

17:22:27.7
CHANNEL NO. 1.2

MICROSECONDS



F-106 LIGHTNING/ 84-028

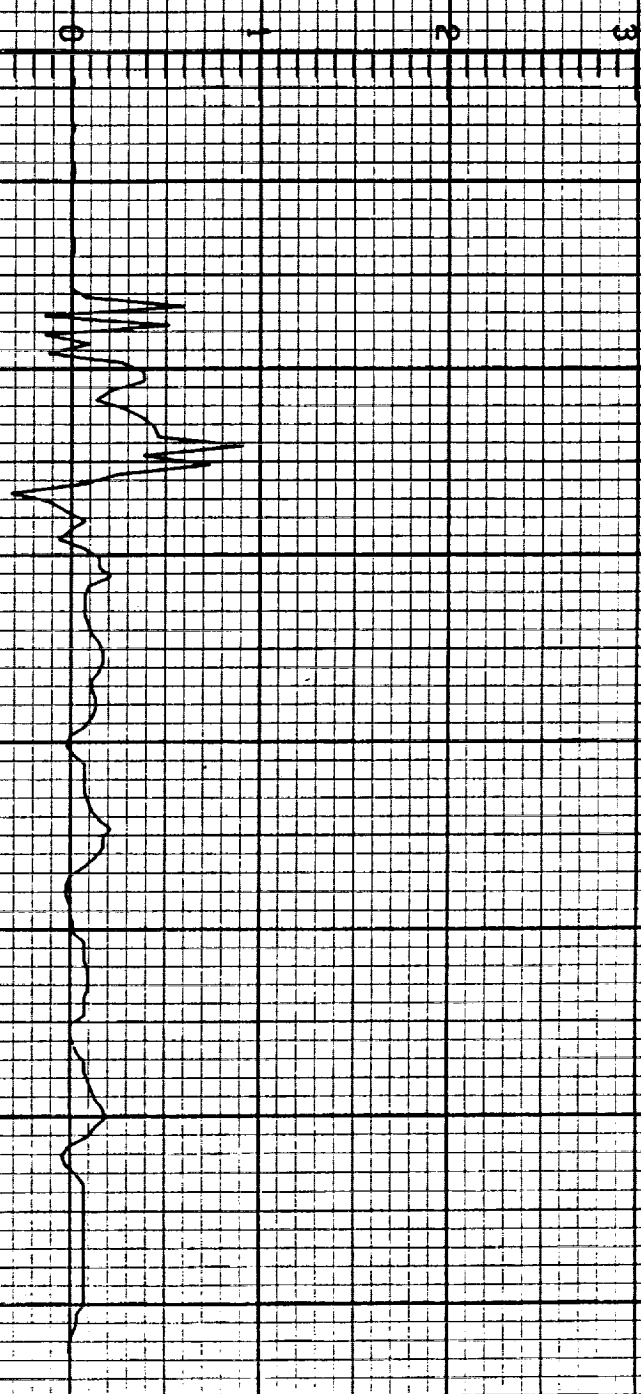
LEC2 RUN NO. 4

5.005

D_t A/m²

17:22:27.7
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

LEC 2 RIN NO. 4

5.005

I A/s

17:22:27.7
CHANNEL NO. 2.1

MICROSECONDS

F-106 LIGHTNING/ 84-028

LEC 2 RUN NO. 4

3.005

B_1 T/s

1800
1200
600
0
-600
-1200
-1800

-.4

-.2

0

.2

.4

.6

.8

1.0

MICROSECONDS

17:22:27.7
CHANNEL NO. 2.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

LEC 3 RUN NO. 4

5.005

\dot{D}_{WT} A/m²

17:22:27.7
CHANNEL NO. 3.0

MICROSECONDS

F-105 LIGHTNING/ 84-028

LEC 3 RUN NO. 4

5.005

\dot{D}_{wl}

A/m²

17:22:27.7
CHANNEL NO. 3.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

LEC 3 RUN NO. 4

5.005

\dot{D}_r A/m²

17:22:27.7
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 4

5.005

TP 100

V_w V

60 40 20 0 20 40 60

17:22:27.7
CHANNEL NO. 4.0

-.4

-.2

0

.2

.4

.6

.8

1.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

IFC 4 RIN NO. 4

6.005

TP 101

V_{fb} V

17:22:27.7
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-028

LECH RUN NO. 4

6.005

TP 102

V_{fc} V

-3 -2 -1 0 1 2 3

-0.4 -0.2 0 .2 .4 .6 .8 1.0

17:22:27.7
CHANNEL NO. 4.2

MICROSECONDS

.2

.4

.6

.8

1.0

F-106 LIGHTNING/ 84-028

LEC 1 RUN NO. 5

5.006

I_n A

17:22:49.0
CHANNEL NO. 1.1

MICROSECONDS

18×10^3

F-106 LIGHTNING/ 84-028

LEC 1 RUN NO. 5

5.006

I_t A

17:22:49.0
CHANNEL NO. 1.2

MICROSECONDS

18×10^3

ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-028

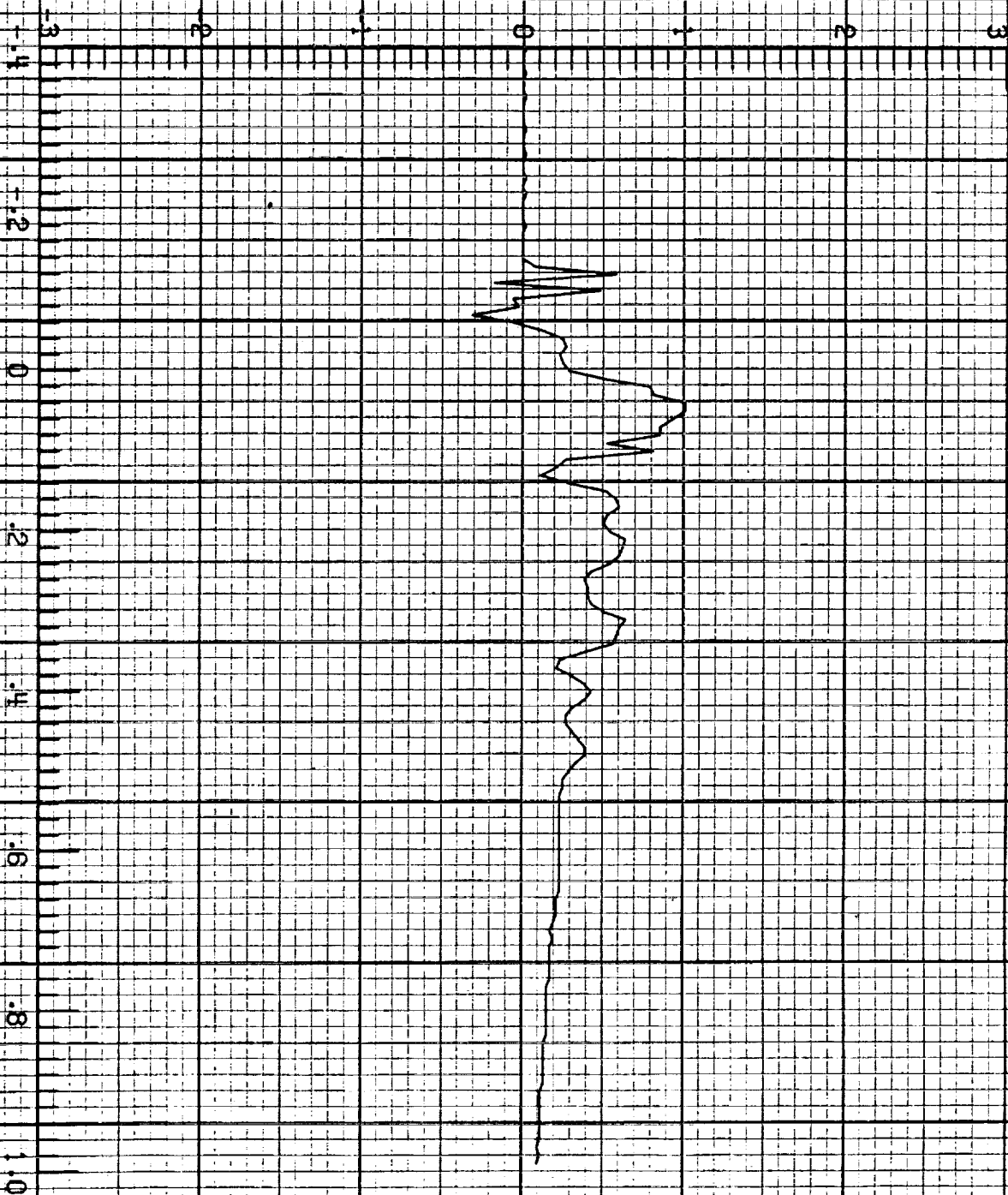
LEC 2 RUN NO. 5

5.006

$D, A/m^2$

17:22:49.0
CHANNEL NO. 2.0

MICROSECONDS



F-106 LIGHTNING/ 84-028

LEO2 RUN NO. 5

6.006

I A/s

24 x 10¹⁰

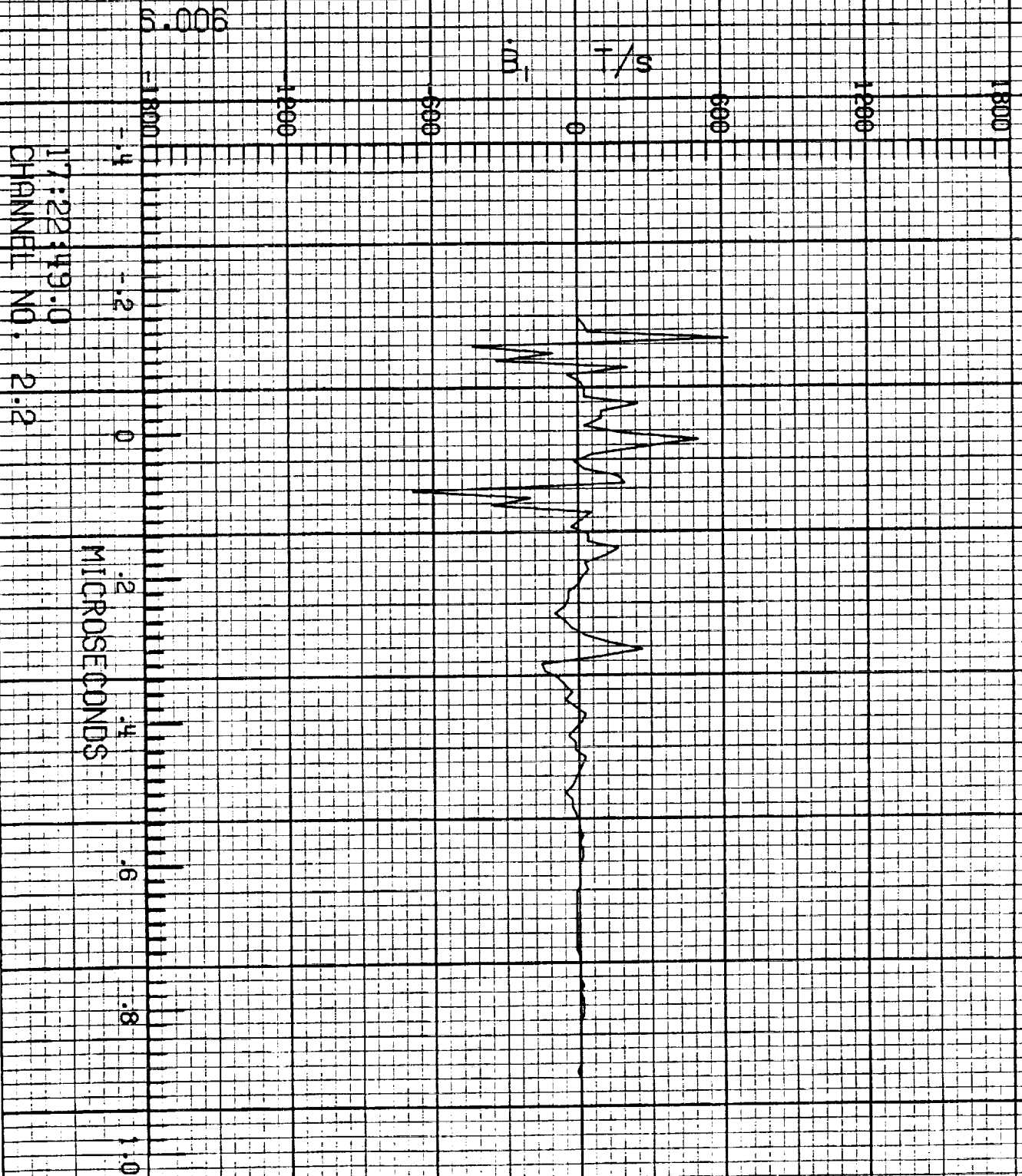
17:22:49.0
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

LEC 2 RUN NO. 5



F-106 LIGHTNING/ 84-028

LEC 3 RUN NO. 5

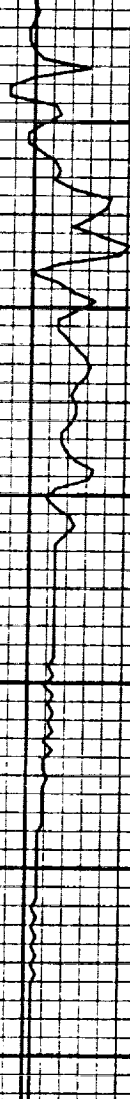
6.006

\bar{D}_{WT}

A/m^2

17:22:49.0
CHANNEL NO. 3.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

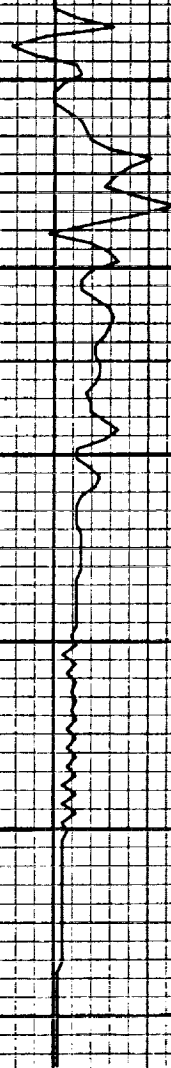
LEC 3 RUN NO. 5

5.006

\dot{D}_{wl} A/m²

17:22:49.0
CHANNEL NO. 3.1

MICROSECONDS



F-106 LIGHTNING/ 84-028

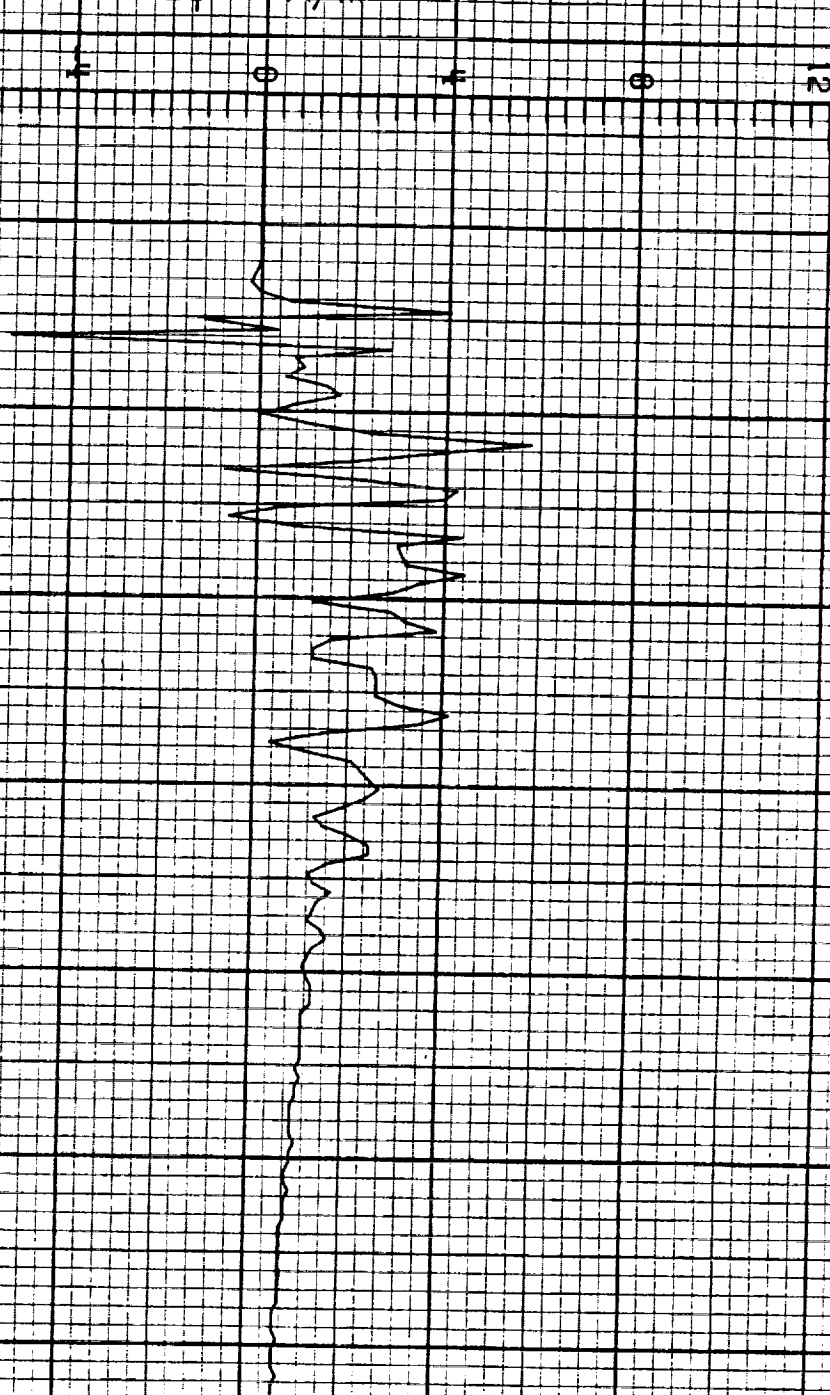
LEC 3 RUN NO. 5

6.006

D_r A/m²

17:22:49.0
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-028

FC 4 RUN NO. 5

6.006

TP 100

V_w V

17:22:49.0
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-028

FC 4 RUN NO. 5

6.006

TP 101

V_{fb} V

17:22:49.0
CHANNEL NO. 4.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-028

LEC 4 RUN NO. 5

5.006

TP 102

V_{fc} V

17:22:49.0
CHANNEL NO. 4.2

MICROSECONDS

F=106 LIGHTNING/ 84-029

LEC 1 RUN NO. 1

6.001

I_n A

20:31:10.5
CHANNEL NO. 1.1

MICROSECONDS

1.8 x 10⁹

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

LEC 1 RUN NO. 1

6.001

I_r A

20:31:10.5
CHANNEL NO. 1.2

MICROSECONDS

18×10^3

F-106 LIGHTNING/ 84-029

LEC 2 RUN NO. 1

5.001

D_t A/m²

20:31:10.5
CHANNEL NO. 2.0

MICROSECONDS



F-106 LIGHTNING/ 84-029

1 FC 2 RUN NO. 1

6.001

\dot{I} A/s

24×10^{10}

20:31:10.5
CHANNEL NO. 2.1

MICROSECONDS

F-106 LIGHTNING/ 84-029

LEC 2 RUN NO. 1

5.001

B_1 T/s

1800 1200 600 0 600 1200 1800

-.6

-.4

-.2

0

.2

.4

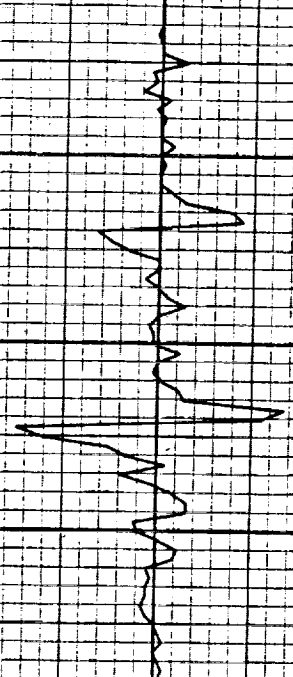
.6

.8

MICROSECONDS

20:31:10.5

CHANNEL NO. 2.2



F-106 LIGHTNING/ 84-029

LEC 3 RUN NO. 1

5.001

\dot{D}_w A/m²

20:31:10.5
CHANNEL NO. 3.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

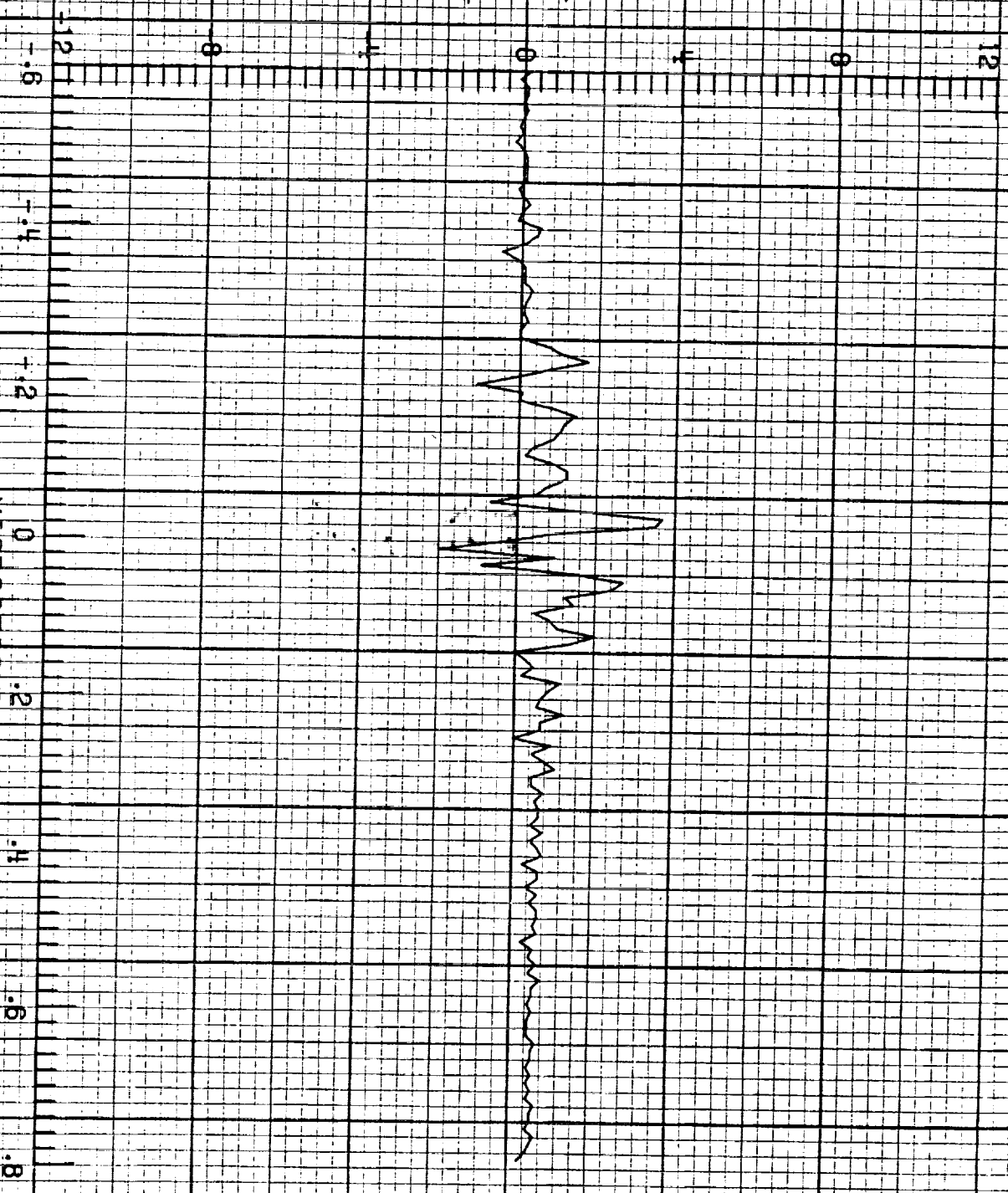
1 FC3 RUN NO. 1

6.001

D_r A/m²

20:31:10.5
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

LEC4 RUN NO. 1

6.001

TP 100

V_w

V

20:31:10.5
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-029

LEC 4 RUN NO. 1

5.001

TP 101

V_{fb}

V

20:31:10.5
CHANNEL NO. 4.1

MICROSECONDS

600

F-106 LIGHTNING/ 84-029

1 EC4 RUN NO. 1

6.001

TP 102

V_{fc} V

20:31:10.5
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-029

LEC 1 RUN NO. 2

6.002

I_r A

20:53:52.3
CHANNEL NO. 1.1

MICROSECONDS

18 x 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

LEC 1 RUN NO. 2

6.002

I_t A

20:53:52.3
CHANNEL NO. 1.2

MICROSECONDS

F-106 LIGHTNING/ 84-029

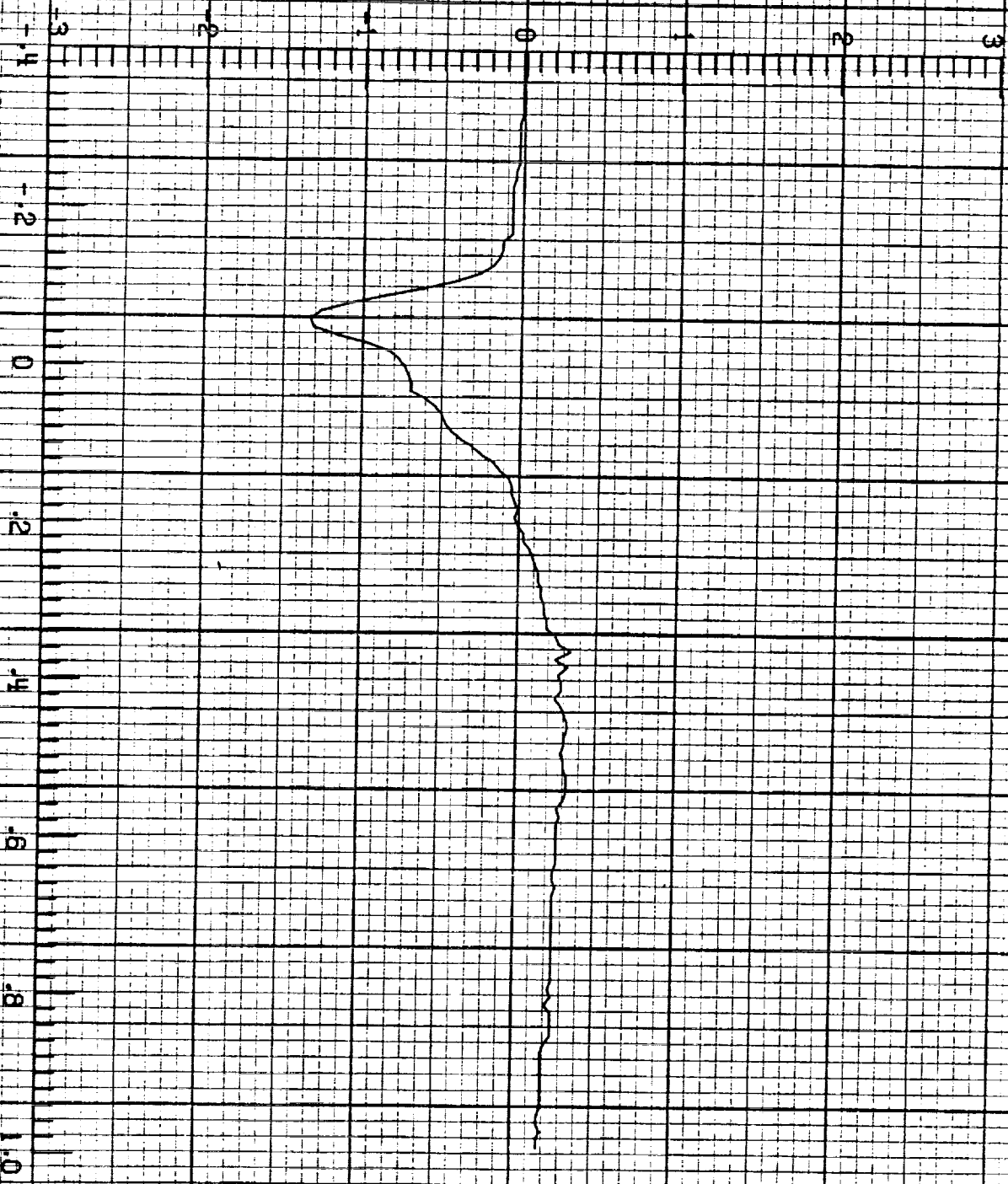
LEC 2 RUN NO. 2

5.002

D_t A/m²

20:53:52.3
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

LEC 2 RUN NO. 2

5.002

I A/s

20:53:52.3
CHANNEL NO. 2.1

MICROSECONDS

24 X 10¹⁰

C-2

F-106 LIGHTNING/ 84-029

FC 2 RUN NO. 2

5.002

\dot{B}_1 T/s

1800
1200
600
0
-600
-1200
-1800



MICROSECONDS

0.2
0.4
0.6
0.8
1.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

1 EC 3 RUN NO. 2

5.002

\dot{D}_{wr} A/m²

20:53:52.3
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-029

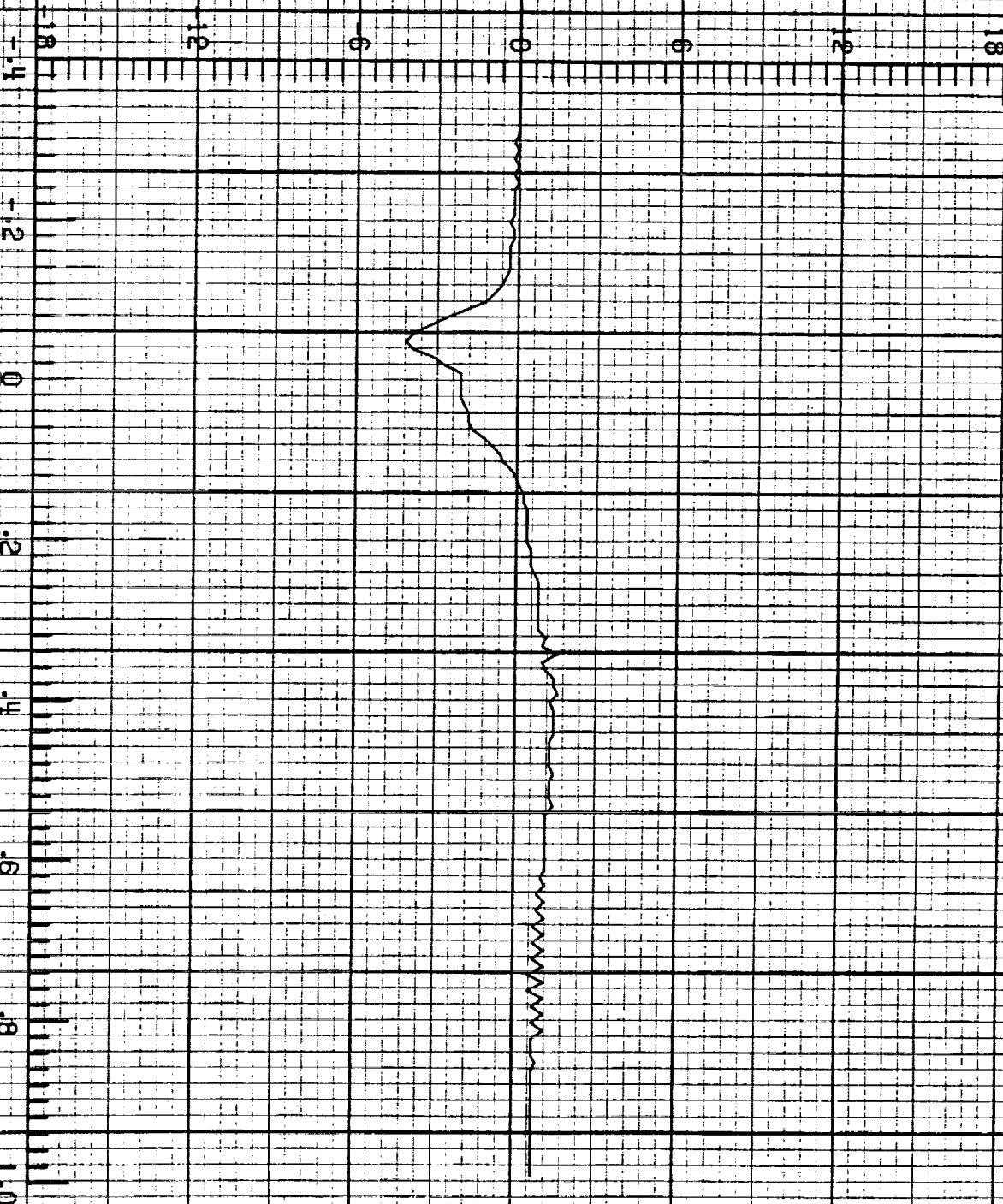
LEC 3 RUN NO. 2

5.002

D_{wl} A/m²

20:53:52.3
CHANNEL NO. 3.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-029

LFC 3 RUN NO. 2

5.002

\dot{D}_r A/m²

20:53:52.3
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-029

1 EC 4 RUN NO. 2

6.002

TP 100

V_w V

20:53:52.3
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-029

LEC 4 RUN NO. 2

S.002

TP 101

V_{fb}

V

20:53:52.3
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-029

LEO 4 RUN NO. 2

6.002

TP 102

V_{fc}

V

20:53:52.3

CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

1 EC 1 RUN NO. 1

6.001

I_n A

16:10:31.0
CHANNEL NO. 1.1

MICROSECONDS

18×10^3

F-106 LIGHTNING/ 84-031

LEC 1 RUN NO. 1

5.001

I_t A

16:10:31.0
CHANNEL NO. 1.2

MICROSECONDS

1.8×10^3

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

1 FC2 RUN NO. 1

S.001

D_t A/m^2

16:10:31.0
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-031

LEC 2 RUN NO. 1

5.001

I A/s

24 16 8 0 8 16 24

24×10^{10}

16:10:31.0
CHANNEL NO. 2.1

-.2

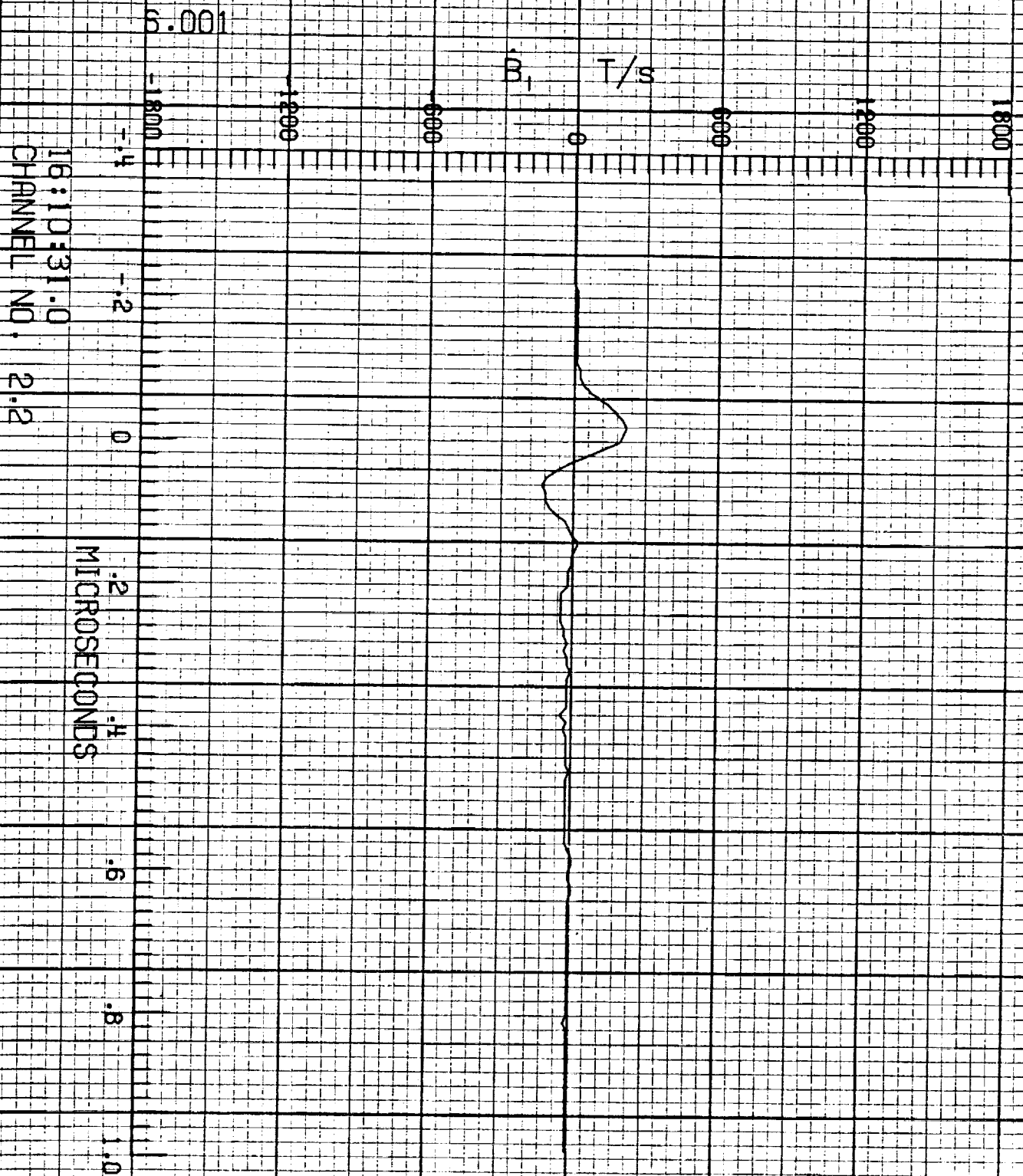
0

MICROSECONDS
.2
.4
.6
.8
1.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

1 EC 2 RUN NO. 1



F-106 LIGHTNING/ 84-031

LEC 3 RUN NO. 1

5.001

\dot{D}_{wr} A/m²

16:10:31.0
CHANNEL NO. 3.0

MICROSECONDS

6.8

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

LEC 3 RUN NO. 1

S.001

\dot{D}_w A/m²

16:10:31.0
CHANNEL NO. 3.1

MICROSECONDS

6.9

F-106 LIGHTNING/ 84-031

EC 3 RUN NO. 1

5.001

\dot{D}_r A/m²

16:10:31.0
CHANNEL NO. 3.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

EC4 RUN NO. 1

6.001

TP 100

V_w

V

16:10:31.0
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-031

LEC 4 RUN NO. 1

6.001

TP 101

V_{fb}

V

-60

0

0

0

0

0

0

-2

0

-2

-4

-6

-8

1.0

MICROSECONDS

16:10:31.0

CHANNEL NO. 4.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

IFC 4 RUN NO. 1

S.001

ORIGINAL PAGE IS
TP 102 POOR QUALITY

V_{fc} V

16:10:31.0
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-031

1 EC 1 RUN NO. 2

5.002

I_n A

-1.6

-0.8

0

.8

1.6

2.4

3.2

4.0

18×10^3

16:28:56.7
CHANNEL NO. 1.1

MICROSECONDS

F-106 LIGHTNING/ 84-031

LEC.1 RUN NO. 2

S.002

I_t A

16:28:56.7
CHANNEL NO. 1.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

IFC 2 RUN NO. 2

6.002

\dot{D}_t A/m²

16:28:56.7
CHANNEL NO. 2.0

MICROSECONDS

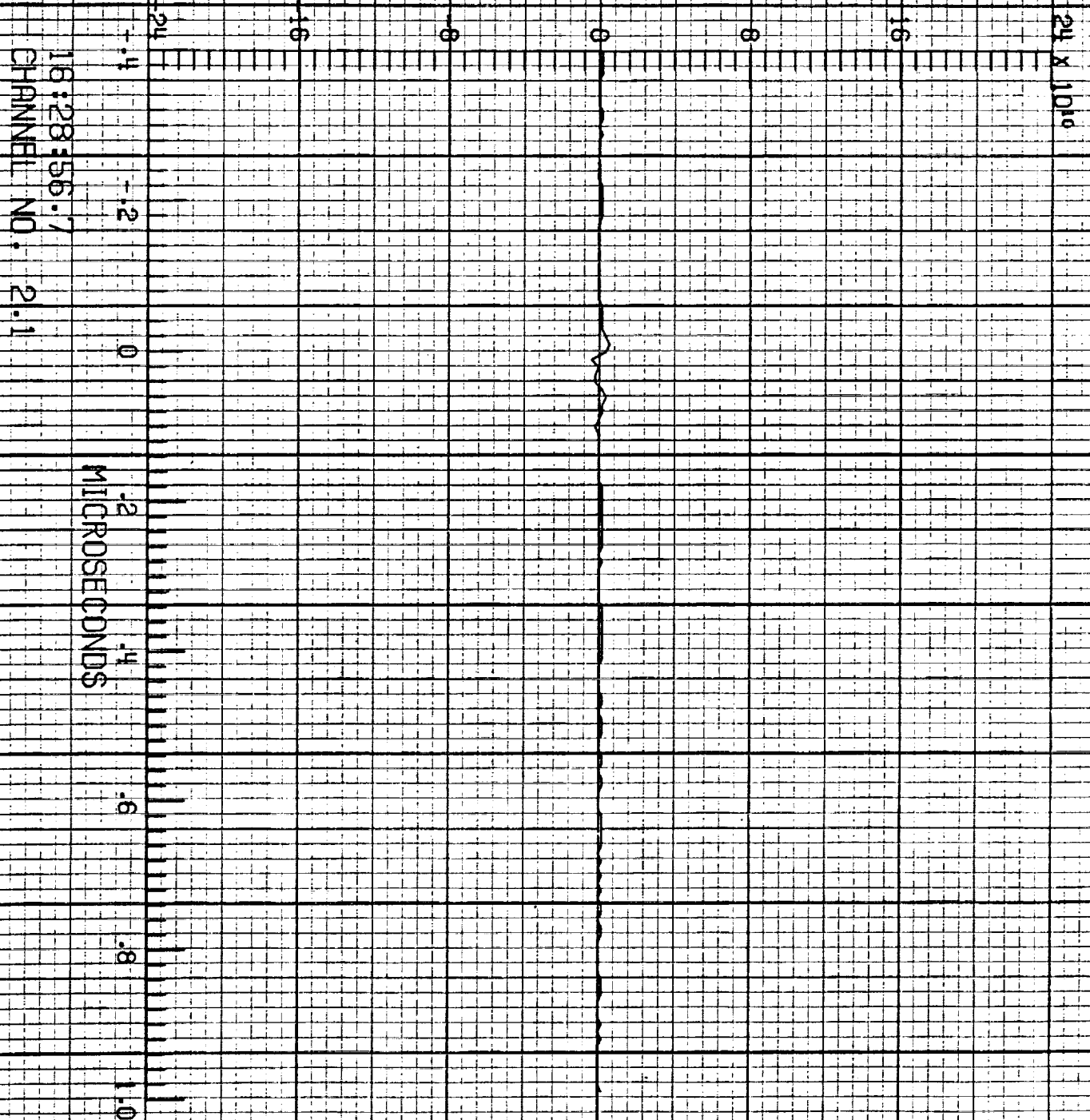
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E-106 LIGHTNING/ 84-031

LEC 2 RUN NO. 2

6.002

I A/s



F-106 LIGHTNING/ 84-031

1 FC 2 RUN NO. 2

6.002

B₁

T/s

-1800

-1200

-600

600

1200

1800

-.4

-.2

0

.2

.4

.6

.8

1.0

16:28:56.7
CHANNEL NO. 2.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-031

IFC 3 RUN NO. 2

S.002

\dot{D}_{wr} A/m²

16:28:56.7
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-031

LEC 3 RUN NO. 2

6.002

\dot{D}_w A/m²

16:28:56.7
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-031

1 EC 3 RUN NO. 2

S.002

\dot{D}_r A/m²

16:28:56.7
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-031

1 FC 4 RUN NO. 2

S.002

TP 100

V_w V

16:28:56.7
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-031

LFC 4 RUN NO. 2

6.002

TP 101

V_{fb}

V

16:28:36.7
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-031

1 FC 4 RUN NO. 2

6.002

TP 102

V_{fc}

V

16:28:56.7
CHANNEL NO. 4.2

MICROSECONDS

634

F-106 LIGHTNING/ 84-032

LEC1 RUN NO. 1

5.002

I_n A

18:53:25.7
CHANNEL NO. 1.1

MICROSECONDS

635

F-106 LIGHTNING/ 84-032

FC1 RUN NO. 1

6.002

T_t A

-1.8
-1.6

1.8

0

0

0

1.8

1.8 X 10³

-.8

0

.8

1.6

2.4

3.2

4.0

MICROSECONDS

18:59:26.7
CHANNEL NO. 1.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 1

6.002

D_t A/m^2

18:59:26.7
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 1

3.002

i A/s

18:59:26.7
CHANNEL NO. 2.1

MICROSECONDS

24 X 10¹⁰

638

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 1

6.002

B_1 T/s

18:59:26.1
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-032

LEC 3 RUN NO. 1

5.002

\dot{D}_{wl} A/m²



18:59:26.7
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-032

LFC 3 RUN NO. 1

6.002

\dot{D}_r A/m²

18:59:26.7
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-032

LECH RUN NO. 1

5.002

TP 100

V_w V

18:59:26.7
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 4 RUN NO. 1

8.002

TP 101

V_{fb}

V

18:59:26.7
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-032

LEC 4 RUN NO. 1

5.002

TP 102

V_{fc}

V

18:59:26.7
CHANNEL NO. 4.2

MICROSECONDS

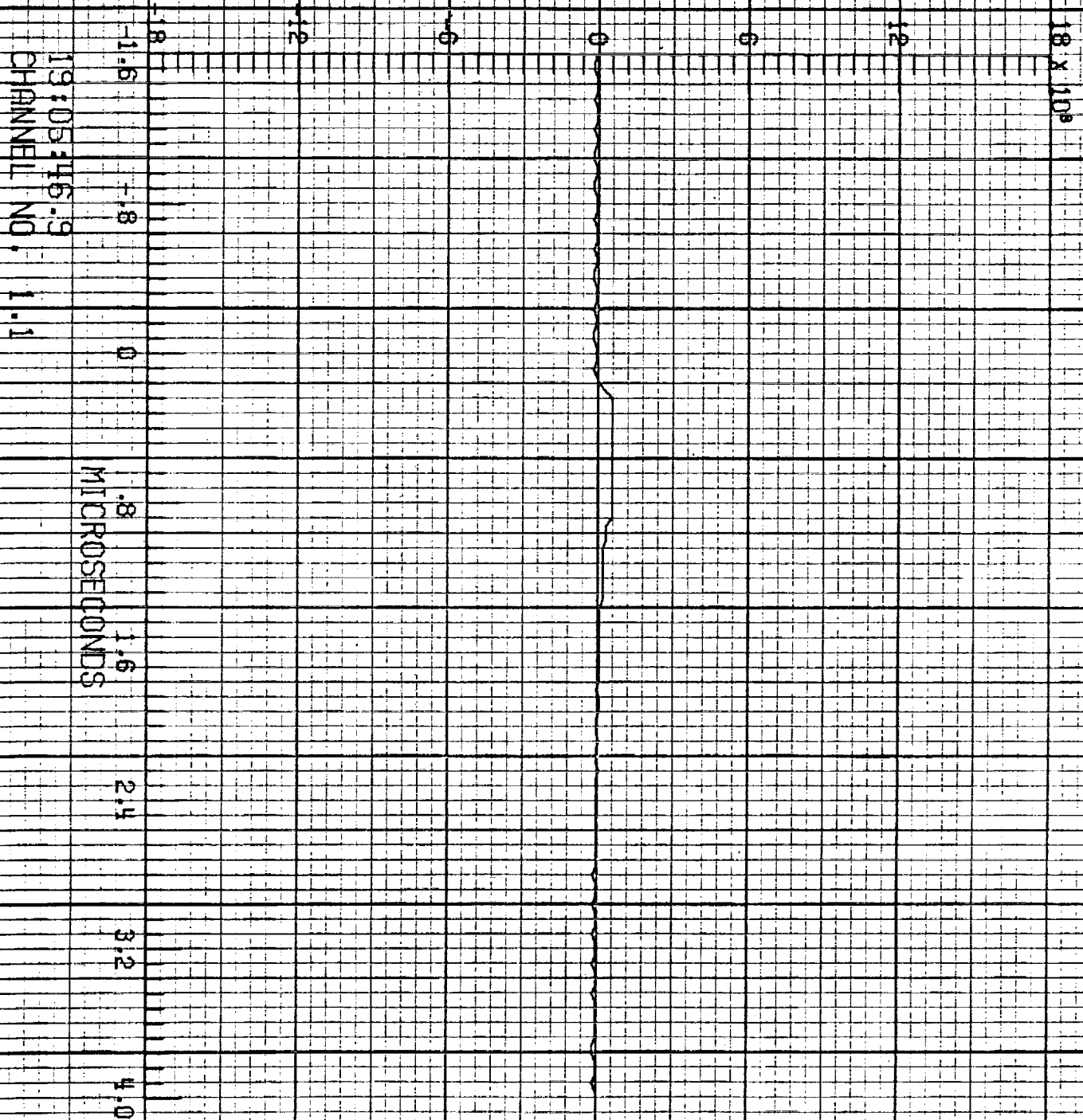
ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

IFC1 RUN NO. 2

6.003

I_{r} A



F-106 LIGHTNING/ 84-032

1 FC 1 RUN NO. 2

6.003

I_t A

19:05:46.9
CHANNEL NO. 1.2

MICROSECONDS

18 X 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

EC 2 RUN NO. 2

6.008

D A/m²

19:05:46.9
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 2

8.003

\dot{I} A/s

25×10^{10}

19:05:46.9
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 2

5.003

B_1 T/s

19:05:46.9
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-032

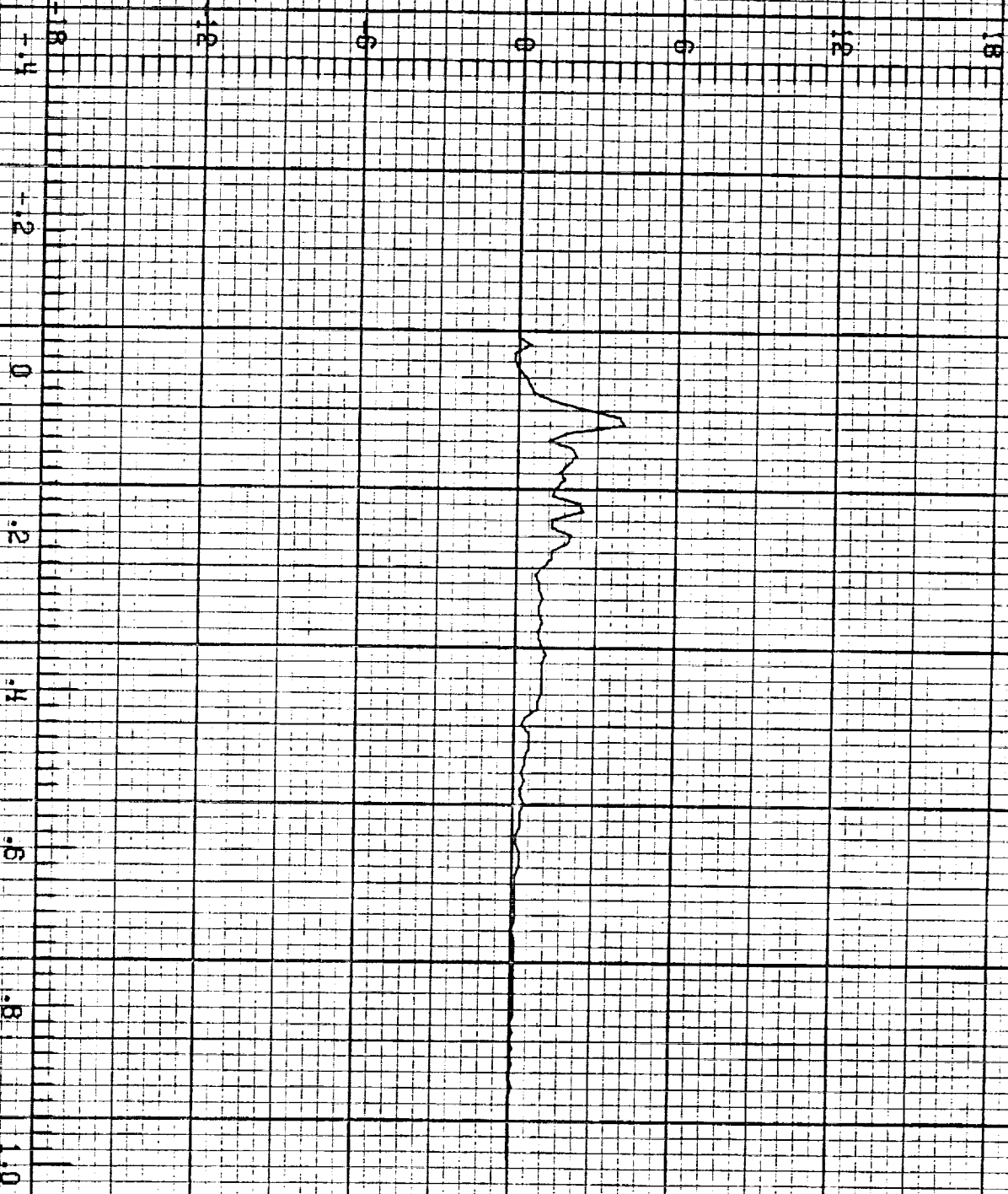
LEC 3 RUN NO. 2

6.003

\hat{D}_{WT} A/m²

19:09:46.9
CHANNEL NO. 3.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 3 RUN NO. 2

5.003

\dot{D}_{w1} A/m^2

19:05:46.9
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-032

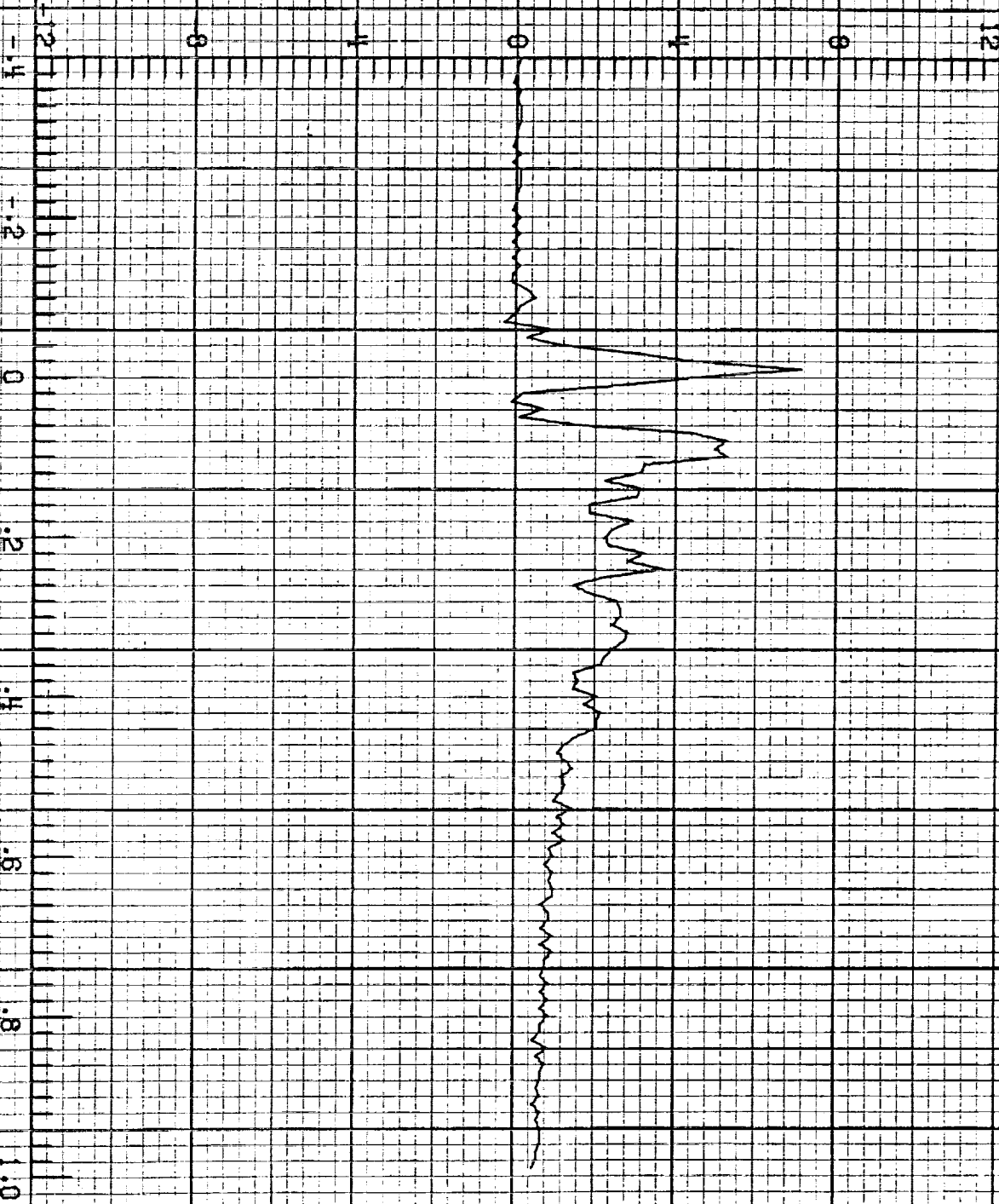
LEO3 RUN NO. 2

6.003

D_r A/m²

19:05:46.9
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-105 LIGHTNING/ 84-032

1 FC4 RUN NO. 2

8.003

TP 100

V_w V

19:05:46.9
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-032

IFC 4 RUN NO. 2

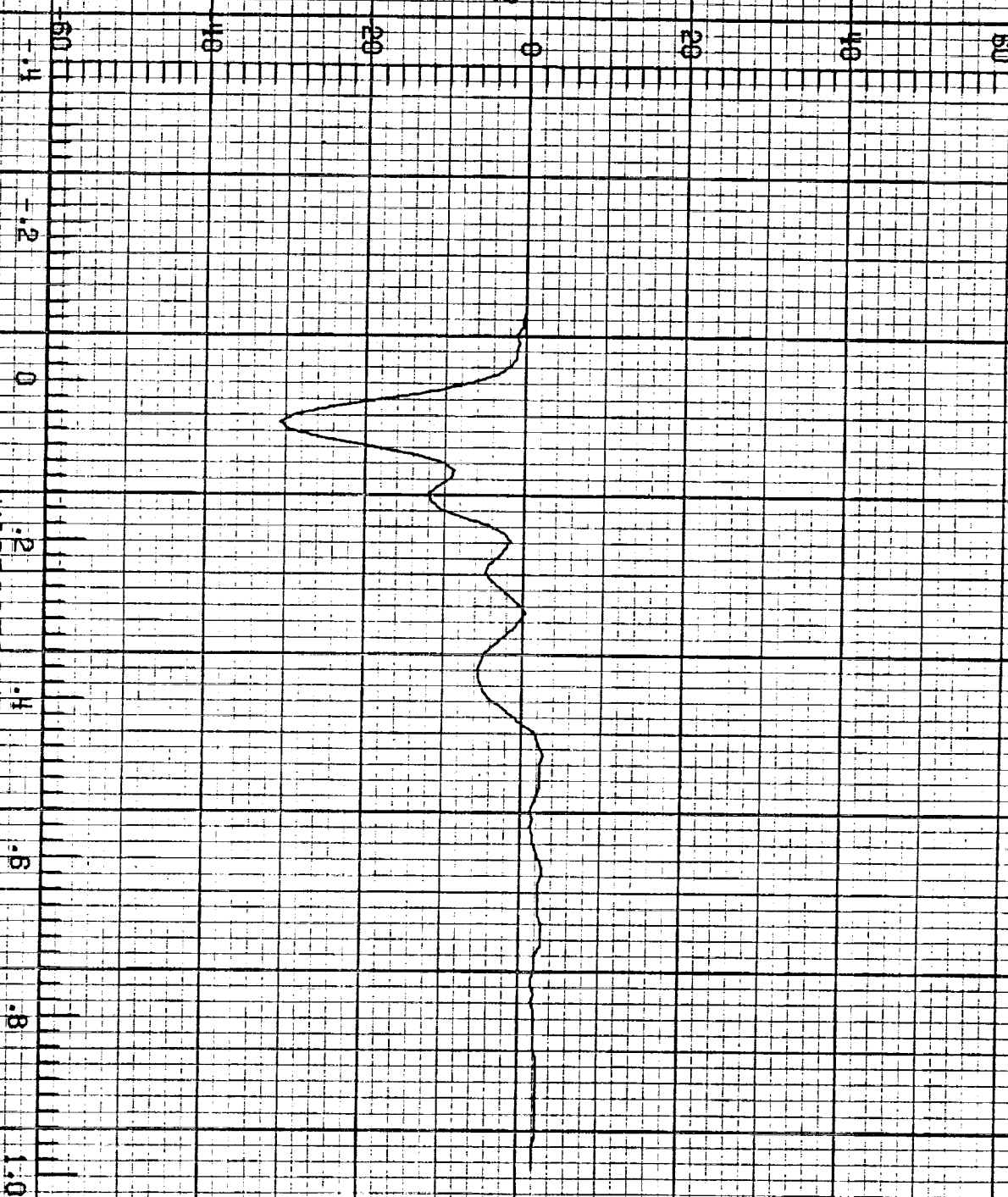
8.003

TP 101

V_{fb} V

19:05:46.9
CHANNEL NO. 4.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-108 LIGHTNING/ 84-032

IFC 4 RUN NO. 2

6.003

TP 102

V_{fc}

V

19:06:46.9
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-032

LFC 1 RUN NO. 3

5.005

I_n A

19:40:33.9
CHANNEL NO. 1.1

10×10^3



E-106 LIGHTNING/ 84-032

LEC 1 RUN NO. 3

3.005

I_t A

19:40:33.9
CHANNEL NO. 1.2

MICROSECONDS

10 x 10³

F-106 LIGHTNING/ 84-032

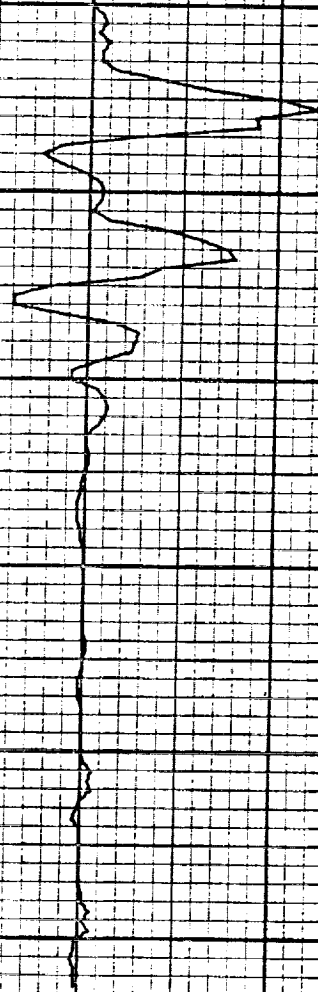
REC 2 RUN NO. 3

6.005

D_t A/m²

19:40:33.9
CHANNEL NO. 2.0

MICROSECONDS



658

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

LEC 2 RUN NO. 3

6.005

\dot{I} A/s

19:40:33.9
CHANNEL NO. 2.1

MICROSECONDS

24 X 10¹⁰

F-106 LIGHTNING/ 84-032

IFC2 RUN NO. 3

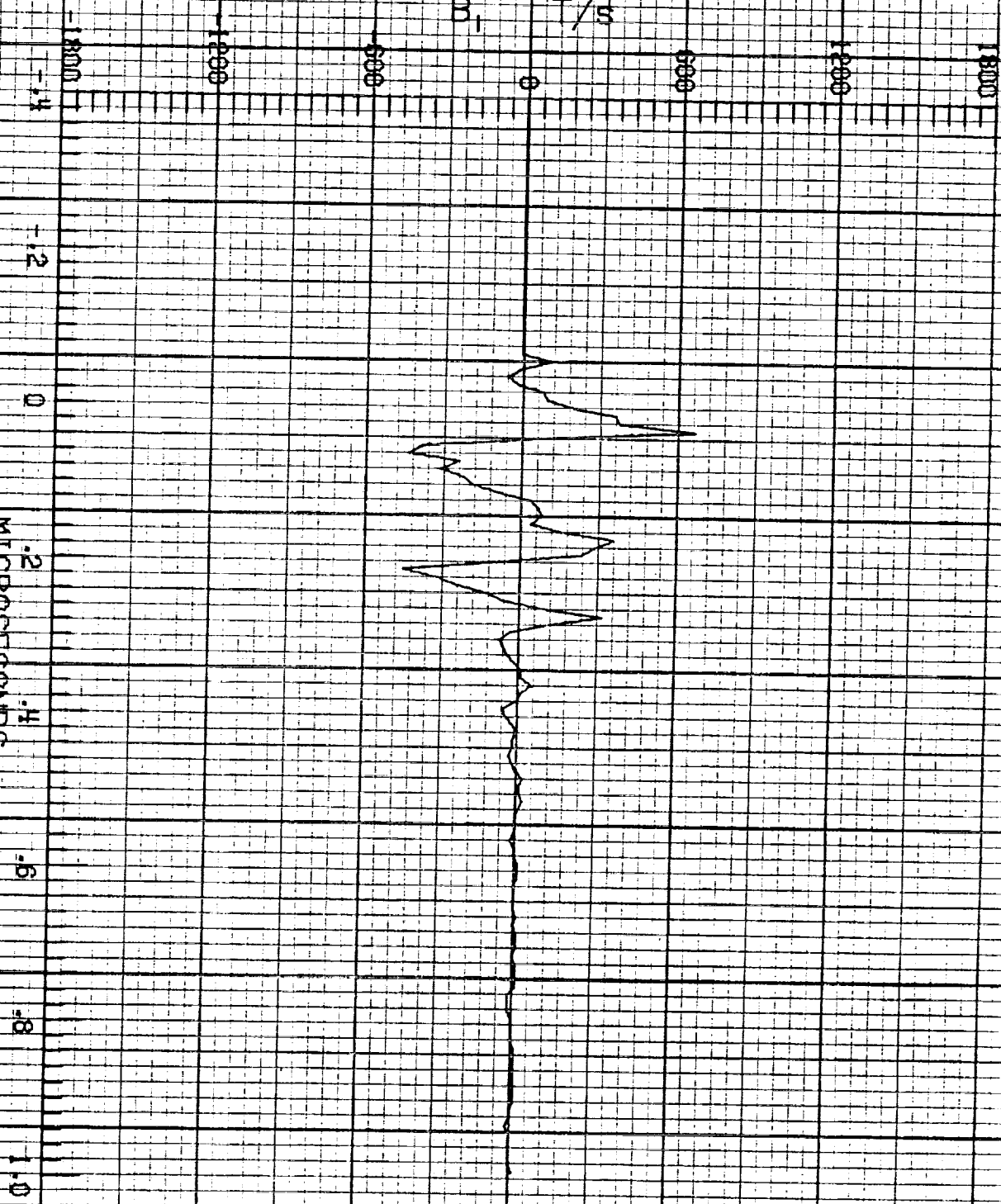
6.005

\dot{B}_1 T/s

19:40:33.9
CHANNEL NO. 2.2

MICROSECONDS

660



F-106 LIGHTNING/ 84-032

EC 3 RUN NO. 3

3.005

\dot{D}_{wr} A/m²

19:40:33.9
CHANNEL NO. 3.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

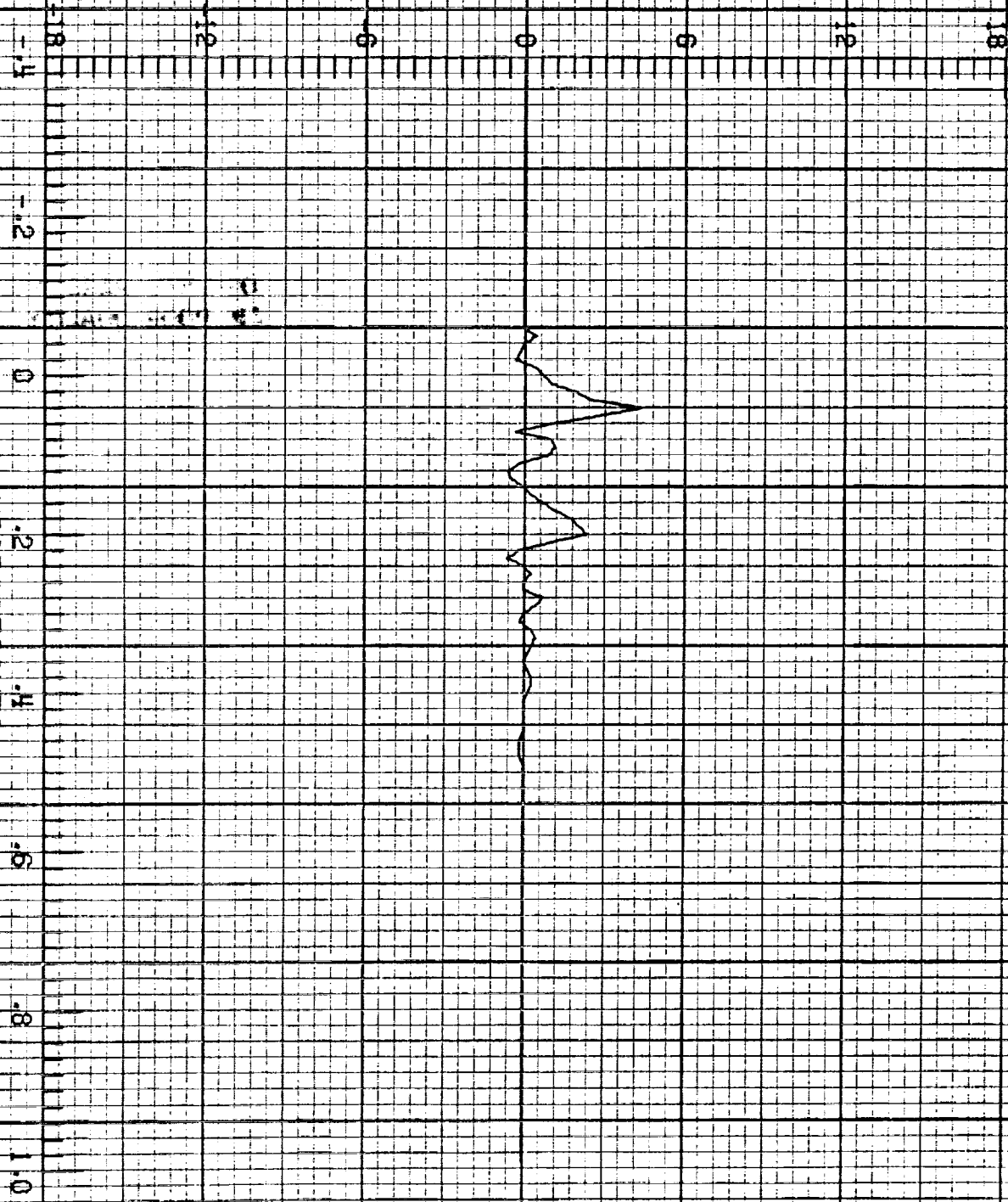
LFC 3 RUN NO. 3

6.005

\dot{D}_{w1} A/m²

19:40:33.9
CHANNEL NO. 3.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

IFC.3 RUN NO. 3

6.005

\dot{D}_r A/m²

19:40:33.9
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-032

LEC 4 RUN NO. 3

3.005

TP 100

V_w V

19:40:33.9
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-032

1 FC 4 RUN NO. 3

3.005

TP 101

V_{fb} V

19:40:33.9
CHANNEL NO. 4.1

MICROSECONDS



F-106 LIGHTNING/ 84-032

LEC 4 RUN NO. 3

5.005

TP 102

V_{fc}

V

19:40:33.9
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-033

LEC 2 RUN NO. 1

5.001

\dot{D}_t A/m²

21:24:54.9
CHANNEL NO. 2.0

MICROSECONDS

F=106 LIGHTNING/ 84-033

IFC2 RUN NO. 1

5.001

I A/s

21:24:54.9
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-033

1 FC2 RUN NO. 1

3.001

\dot{B}_1 T/s

21:24:54.9
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-033

1 FC 2 RUN NO. 2

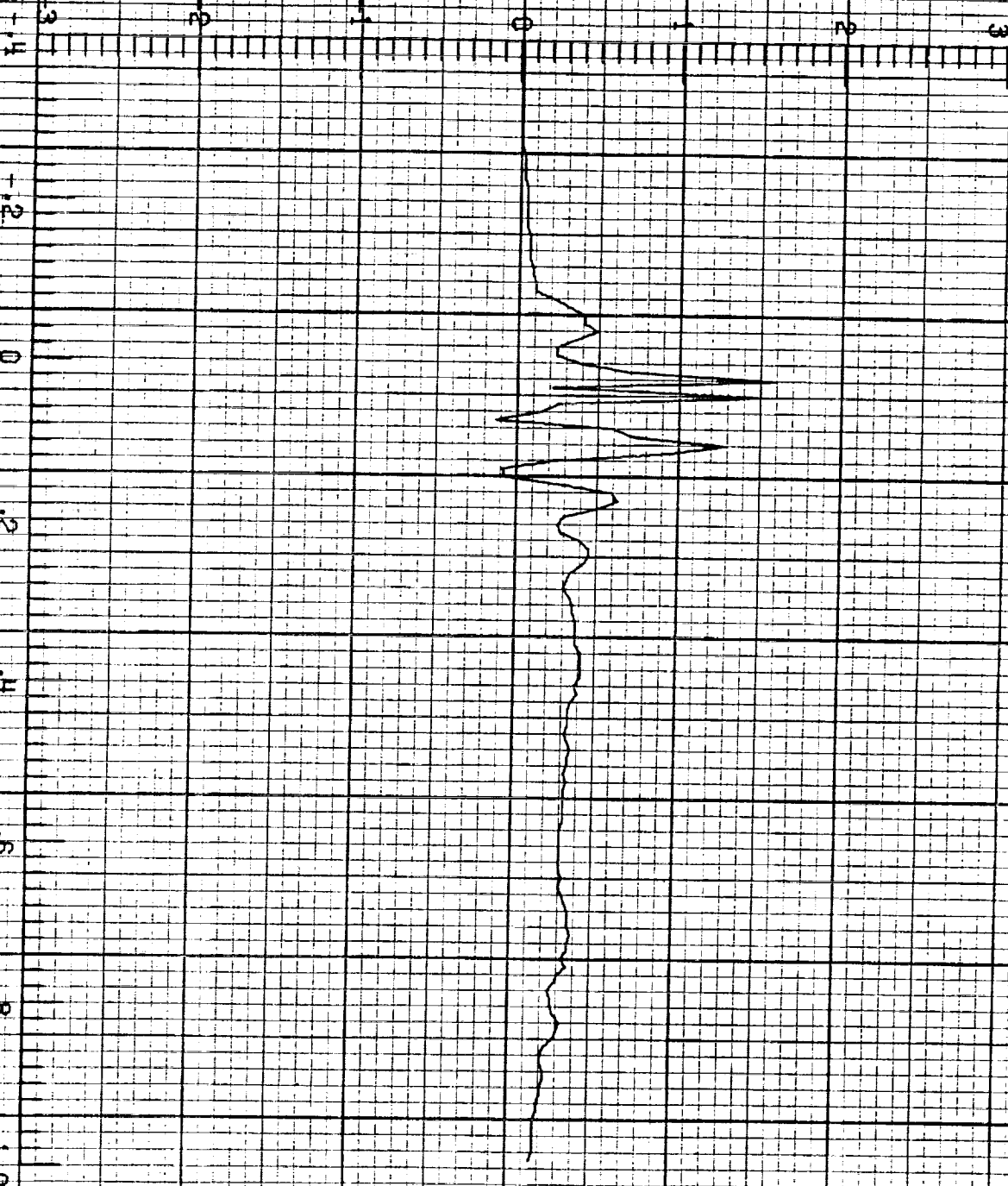
6.004

\dot{D}_t A/m²

21:25:53.9
CHANNEL NO. 2.0

MICROSECONDS

670



F-106 LIGHTNING/ 84-033	LEC 2	RUN NO. 2
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I A/S

$$24 \times 10^{10}$$

2.4 MICROSECONDS

671

F-106 LIGHTNING/ 84-033

LEC 2 RUN NO. 2

5.004

\dot{B}_1 T/s

-1800

-1200

-600

0

600

1200

1800

-.4

-.2

0

.2

.4

.6

.8

1.0

MICROSECONDS

21:25:53.9
CHANNEL NO. 2.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-033

1 FC.2 RUN NO. 3

6.006

D_t A/m²

21:30:16.1
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-033

1 EC 2 RUN NO. 3

5.006

\dot{I} A/s

24×10^{10}

21:30:16.1
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-033

LFC2 RUN NO. 3

6.006

\dot{B}_1 T/s

21:30:16.1
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-033

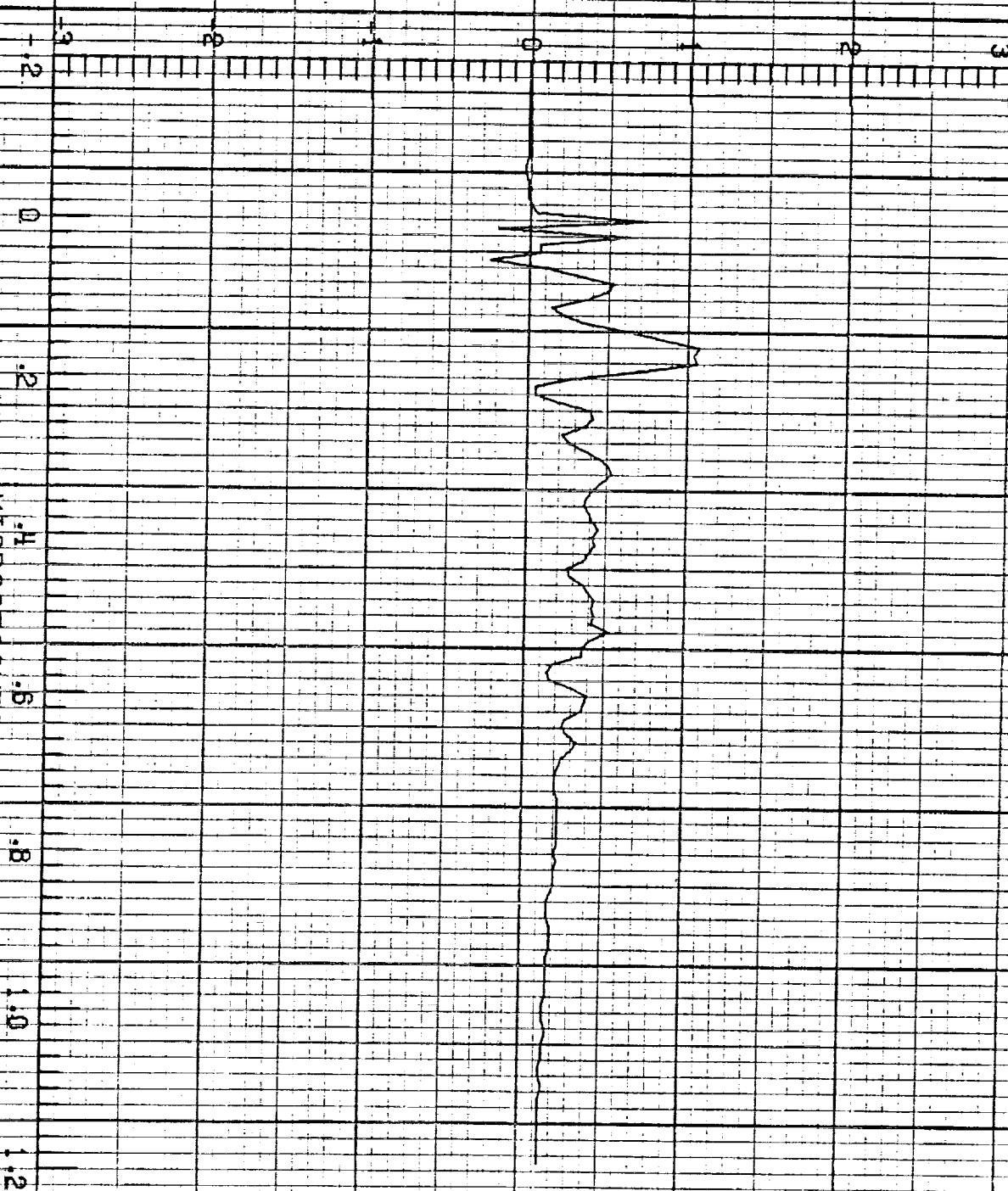
LEC 2 RUN NO. 4

5.001

D_t A/m²

21:44:37.2
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-033

LEC 2 RUN NO. 4

5.001

i A/s

21:44:37.2
CHANNEL NO. 2.1

MICROSECONDS

24 x 10¹⁰

F-106 LIGHTNING/ 84-033

LEC 2 RUN NO. 4

5.001

\dot{B}_1 T/s

21:44:37.2
CHANNEL NO. 2.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 1 RUN NO. 1

5.001

I_n A

18:41:59.5
CHANNEL NO. 1.1

MICROSECONDS

18 X 10³

F=106 LIGHTNING/ 84-035

LEC 1 RUN NO. 1

S.001

I_t A

18 x 10³

18:41:59.5
CHANNEL NO. 1.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

LEC 2 RUN NO. 1

5.001

D_t A/m^2

18:41:59.5
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-035

1 FC 2 RUN NO. 1

5.001

I A/s

24 x 10¹⁴

18:41:59.5
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC2 RUN NO. 1

6.001

B_1 T/s

18:41:59.5
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

1 FC4 RUN NO. 1

6.001

TP 100

V_W V

60 40 20 0 20 40 60

1.2

1.1

0

.1

.2

.3

.4

.5

18:41:59.5
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

1 FC4 RUN NO. 1

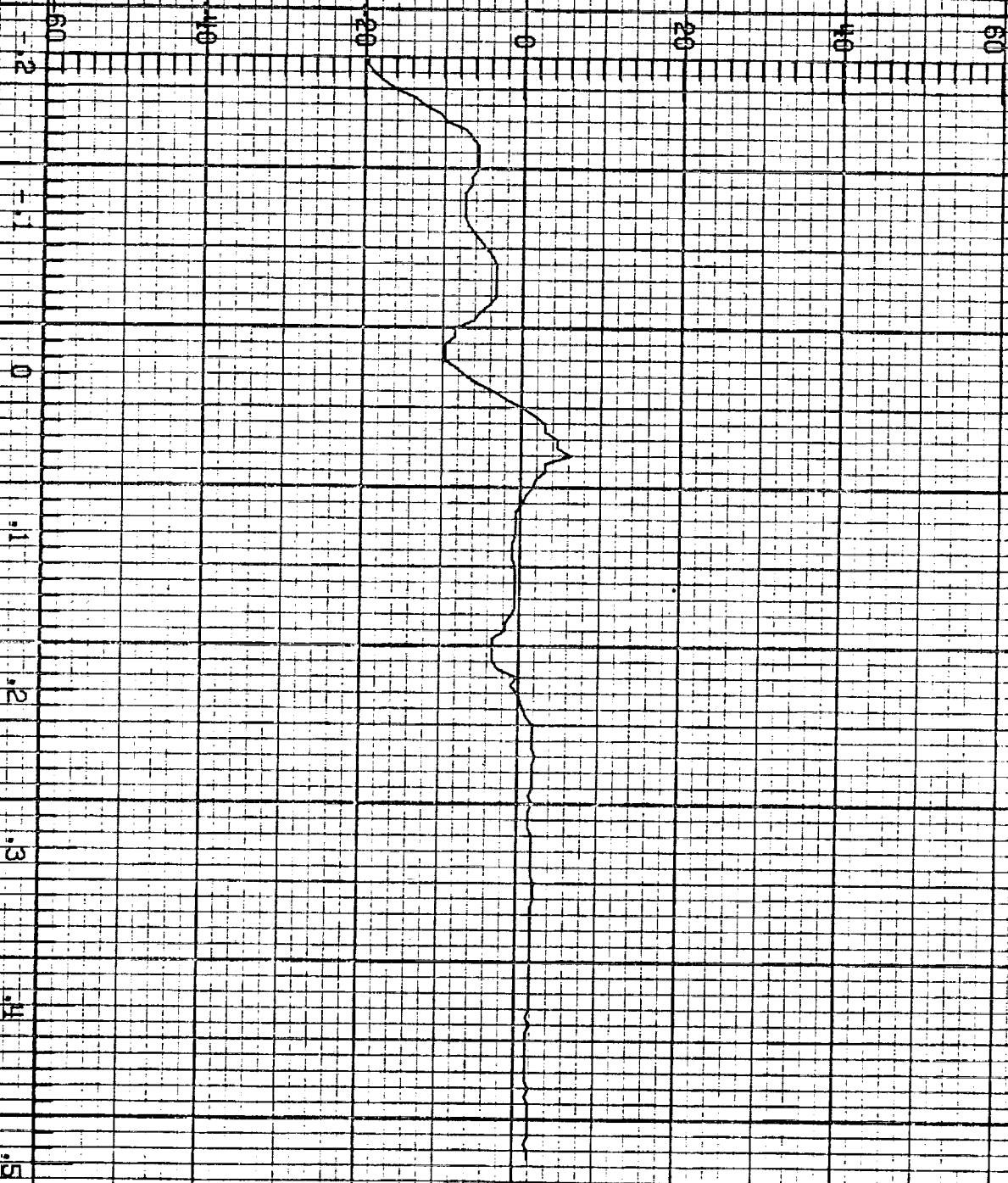
5.001

TP 101

V_{fb} V

18:41:59.5
CHANNEL NO. 4.1

MICROSECONDS



F-106 LIGHTNING/ 84-035

LECH RUN NO. 1

5.001

TP123 A

18:41:59.8
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

1 FC 1 RUN NO. 2

6.003

T_n A

18:55:37.4
CHANNEL NO. 1.1

MICROSECONDS

18 x 10³

F-106 LIGHTNING/ 84-035

1 FC1 RUN NO. 2

5.003

I_t A

18:55:37.4
CHANNEL NO. 1.2

18 x 10³

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 184-035

1 EC 2 RUN NO. 2

6.003

D_t A/m^2

18:55:37.4
CHANNEL NO. 2.0

MICROSECONDS

F=106 LIGHTNING/ 84-035

LEC 2 RUN NO. 2

5.003

\dot{I} A/s

24 x 10⁴

18:55:37.4
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

FC 2 RUN NO. 2

5.003

\dot{B}_1 T/s

18:55:37.4
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

LEC 4 RUN NO. 2

3.003

TP 100

V_w V

18:55:37.4
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-035

1 EC 4 RUN NO. 2

5.003

TP 101

V₁₀ V

18:55:37.4
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-035

LECH RUN NO. 2

6.003

TP123

A

18:55:37.4
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

EC 1 RUN NO. 3

3.00±

I_r A

18:55:57.5
CHANNEL NO. 1.1

MICROSECONDS

18 x 10³

F-106 LIGHTNING/ 84-035

LEC1 RUN NO. 3

5.004

I_t A

18:55:57.5
CHANNEL NO. 1.2

MICROSECONDS

18×10^3

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

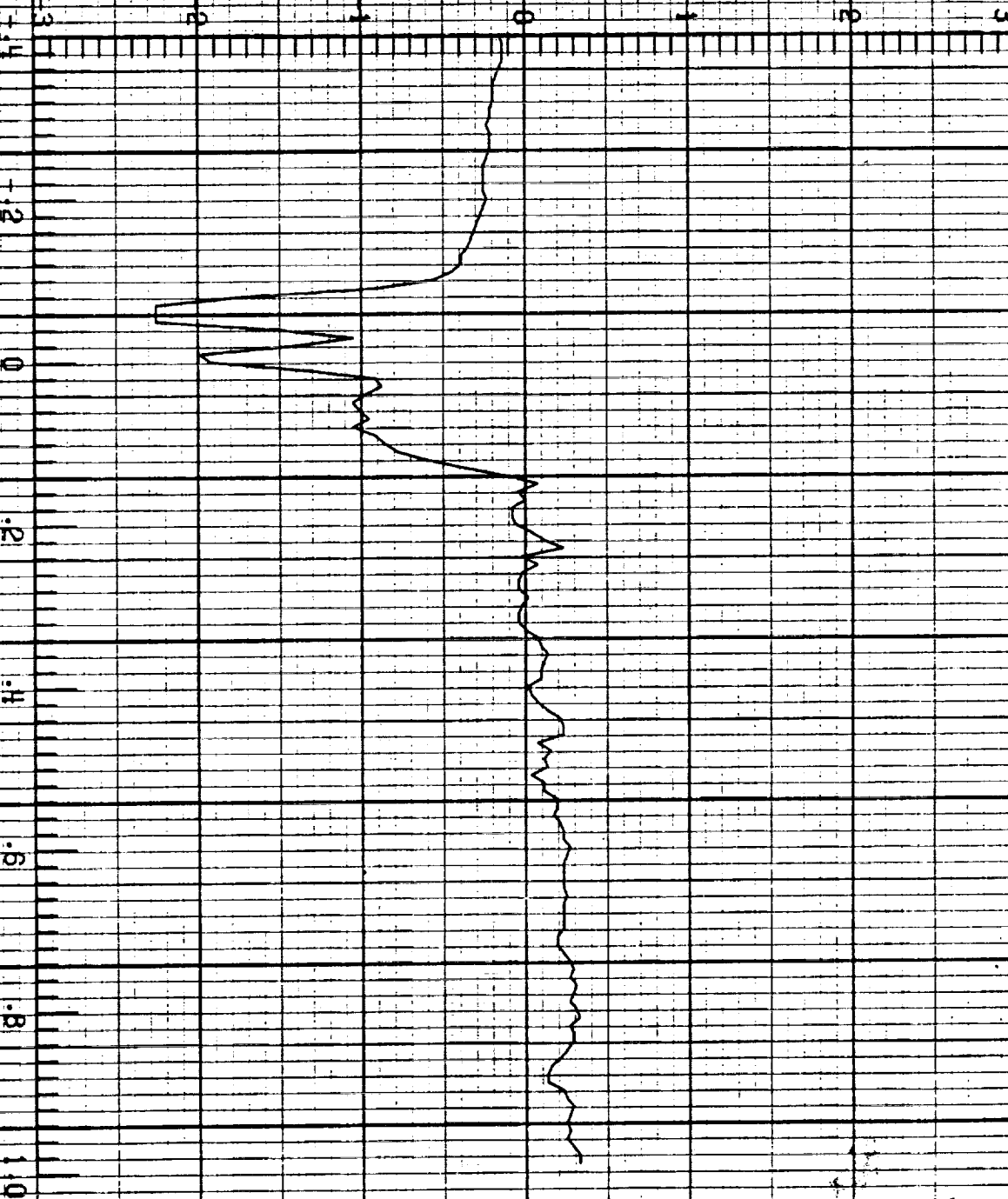
LEC 2 RUN NO. 3

5.004

D_t A/m²

18:55:57.5
CHANNEL NO. 2.0

MICROSECONDS



F-106 LIGHTNING/ 84-035

FC2 RUN NO. 3

5.00±

I A/s

24 x 10¹⁴

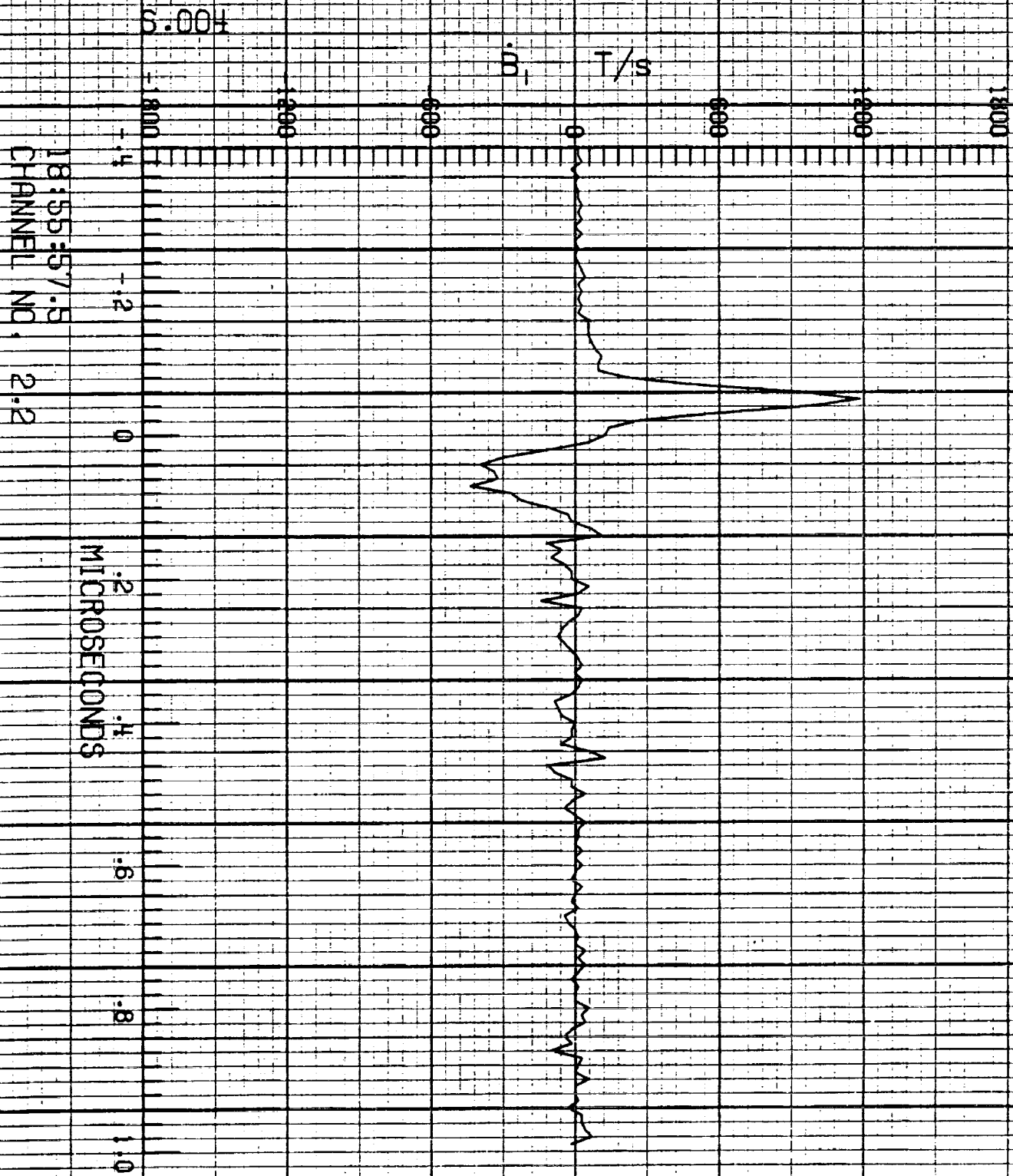
18:55:57.5
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 2 RUN NO. 3



F=106 LIGHTNING/ 84-035

IFC 4 RUN NO. 3

5.004

TP 100

V_w V

60 40 20 0 20 40 60

-.2

-.1

0

.1

.2

.3

.4

.5

18:53:57.5
CHANNEL NO. 4.0

MICROSECONDS

700

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEO 4 RUN NO. 3

TP 101

V_{1b} V

5.004

18:55:57.5
CHANNEL NO. 4.1

MICROSECONDS

701

F-106 LIGHTNING/ 84-035

LEC 4 RUN NO. 3

5.004

TP123

A

18:55:57.5
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

EC 1 RUN NO. 4

5.005

I_n A

18:59:25.1
CHANNEL NO. 1.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 1 RUN NO. 4

6.005

I_t A

18 x 10³

18:59:25.1
CHANNEL NO. 1.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 2 RUN NO. 4

5.005

D_1 A/m²

18:59:25.1
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-035

1 EC2 RUN NO. 4

6.005

I A/s

24 x 10⁹

18:59:25.1
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LFC2 RUN NO. 4

3.005

\dot{B}_1 T/s

18:59:25.1
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

1 FC 4 RUN NO. 4

6.005

TP 100

V_w V

18:59:25.1
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 4 RUN NO. 4

6.005

TP 101

V_{fb} V

18:59:25.1
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-035

LEC 4 RUN NO. 4

6.005

TP123

A

18:59:25.1
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEO-1 RUN NO. 5

6.006

I_r A

19:10:34.1
CHANNEL NO. 1.1

MICROSECONDS

10×10^3

F-106 LIGHTNING/ 64-035

FC1 RUN NO. 5

6.006

I₁ A

1.8

1.8

1.8

1.8

1.8

1.8

1.8

$\times 10^3$

0

.8

1.6

2.4

3.2

4.0

4.8

MICROSECONDS

19:10:34.1

CHANNEL NO. 1.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

REC 2 RUN NO. 5

6.006

D_t A/m²

19:10:34.1
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-035

1 EC2 RUN NO. 5

6.006

\dot{I} A/s

19:10:34.1
CHANNEL NO. 2.1

24×10^4

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

FC2 RUN NO. 5

3.006

\dot{B}_1 T/s

19:10:34.1
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-035

LECH RUN NO. 5

6.006

TP 100

V_w V

19:10:34.1
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-035

LEC 4 RUN NO. 5

5.006

TP 101

V_{fb}

V

19:10:33.1
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-035

LECH RUN NO. 5

5.006

TP123

A

19:10:34.1
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 1 RUN NO. 1

5.001

I_r A

20:25:48.5
CHANNEL NO. 1.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 1 RUN NO. 1

5.001

I_t A

20:25:48.5
CHANNEL NO. 1.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-036

1 EC 2 RUN NO. 1

3.001

D_1 A/m²

20:25:48.5
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEG 2 RUN NO. 1

6.001

\dot{I} A/s

24×10^{14}

-3

-2

-1

0

.1

.2

.3

.4

MICROSECONDS

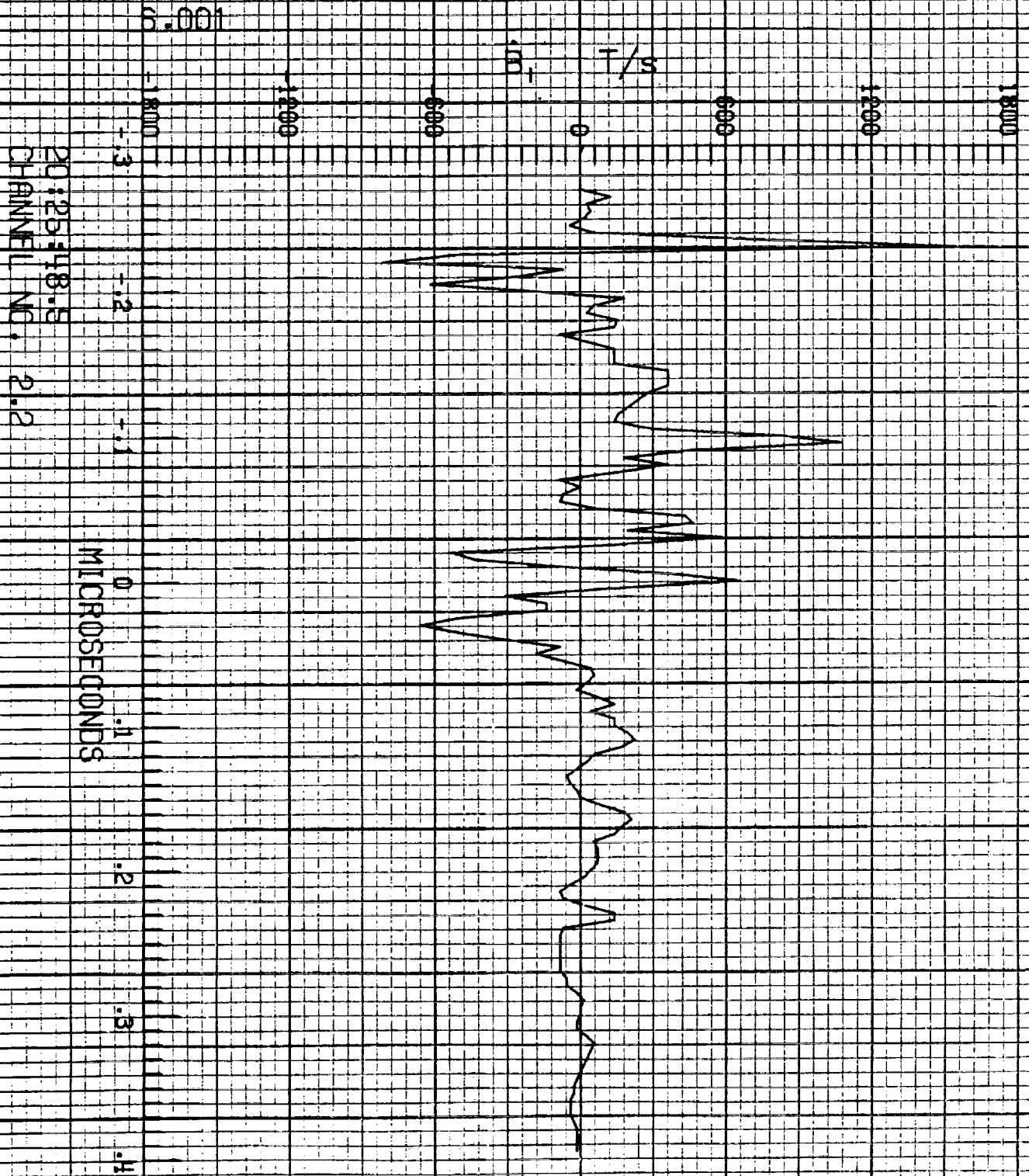
20:25:48.5
CHANNEL NO. 2.1



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 2 RUN NO. 1



F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 1

0.001

\dot{D}_w A/m²

-18 -16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18

20:25:48.5
CHANNEL NO. 3.1

.2

0

.2

MICROSECONDS

.4

.5

.8

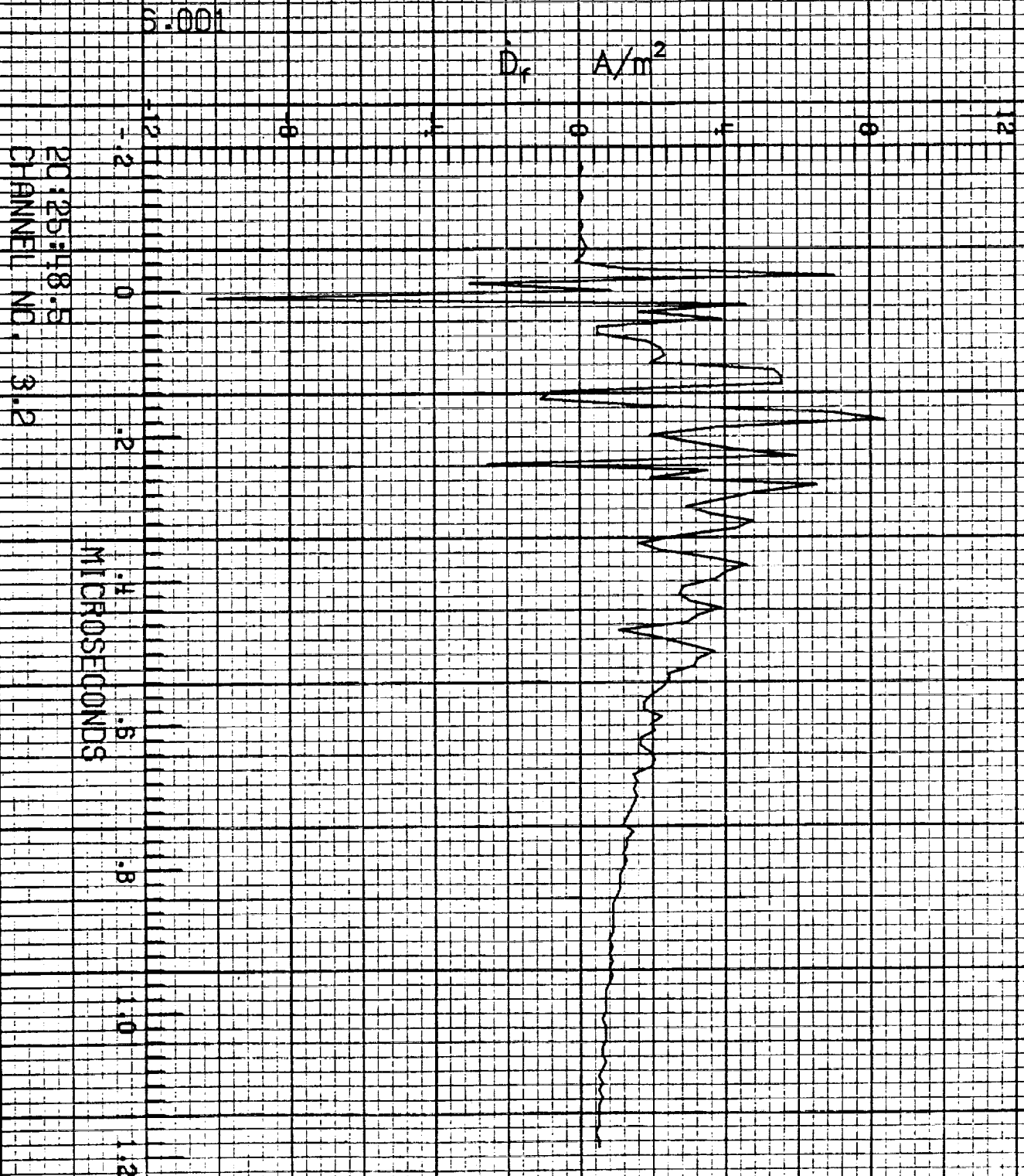
1.0

1.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 1



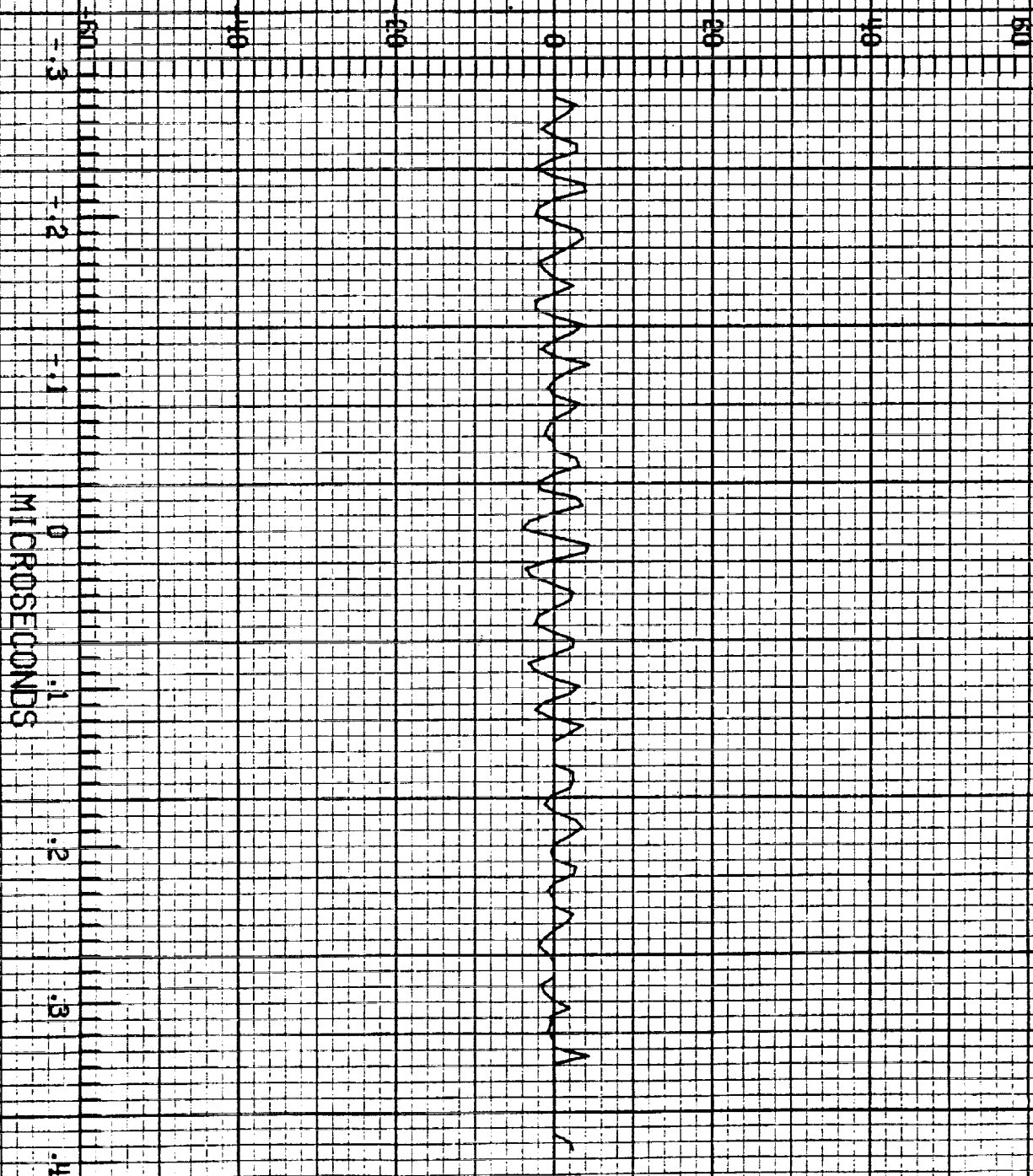
F-106 LIGHTNING/ 84-036

LEC # RUN NO. 1

6.001

TP 100

V_w V



20:25:48.5
CHANNEL NC. 4.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 4 RUN NO. 1

6.001

TP 101

V_{fb} V

20:25:48.5
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

LECH RUN NO. 1

5.001

TP123

A

20:25:48.5
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 1 RUN NO. 2

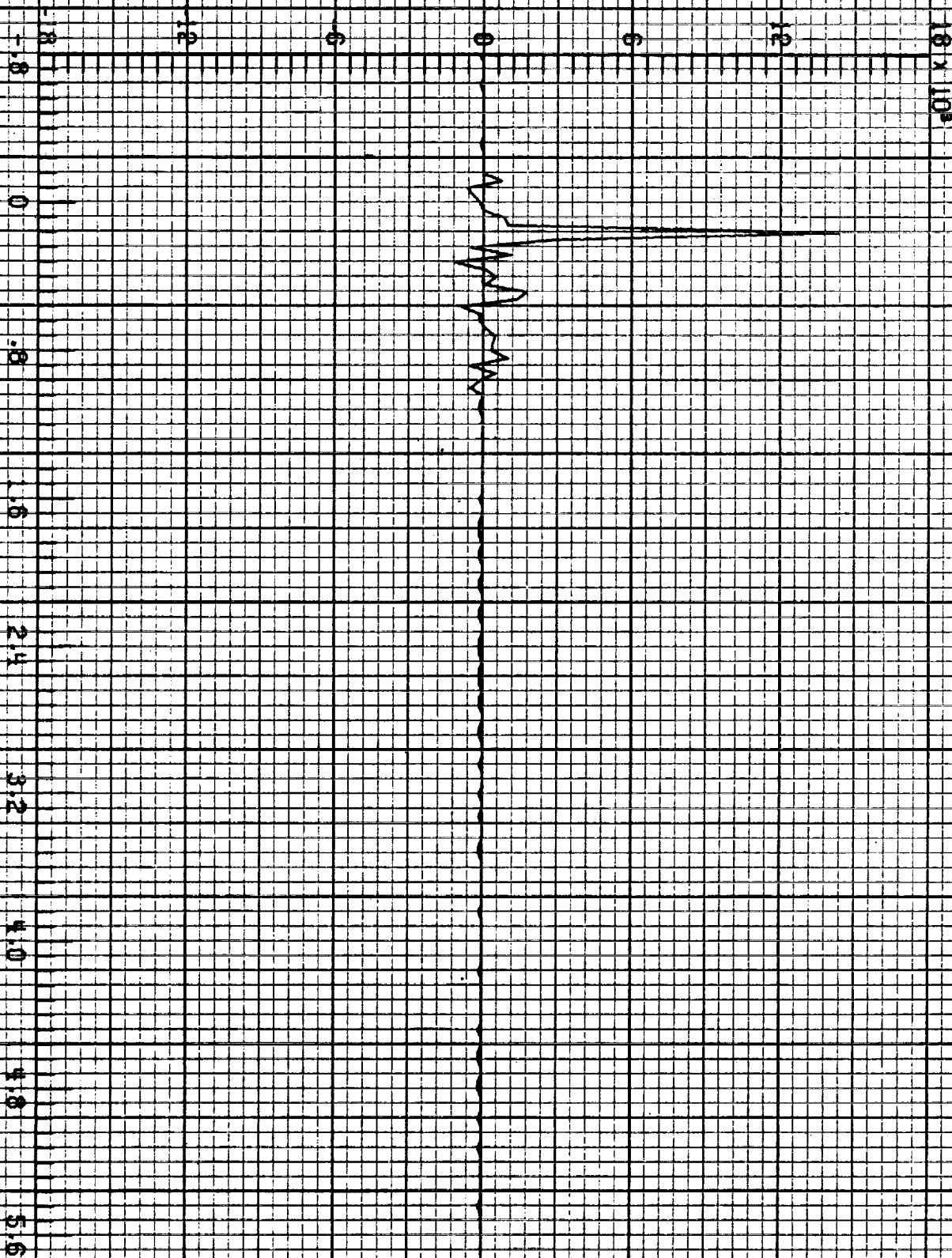
5.003

ORIGINAL PAGE IS
OF POOR QUALITY

I_n A

20:30:50.1
CHANNEL NO. 1.1

MICROSECONDS



F-106 LIGHTNING/ 84-036

LEC1 RUN NO. 2

5.008

I₁

A

18 x 10³

1.8

1.6

1.4

1.2

1.0

0.8

0

0.8

1.6

2.4

3.2

4.0

4.8

5.6

MICROSECONDS

20:30:50.1

CHANNEL NO. 1.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 FC2 RUN NO. 2



F-106 LIGHTNING/ 64-036

1 EC2 RUN NO. 2

i A/s

24 x 10¹⁰

24

16

15

14

13

12

11

10

9

CHANNEL NO. 2.1

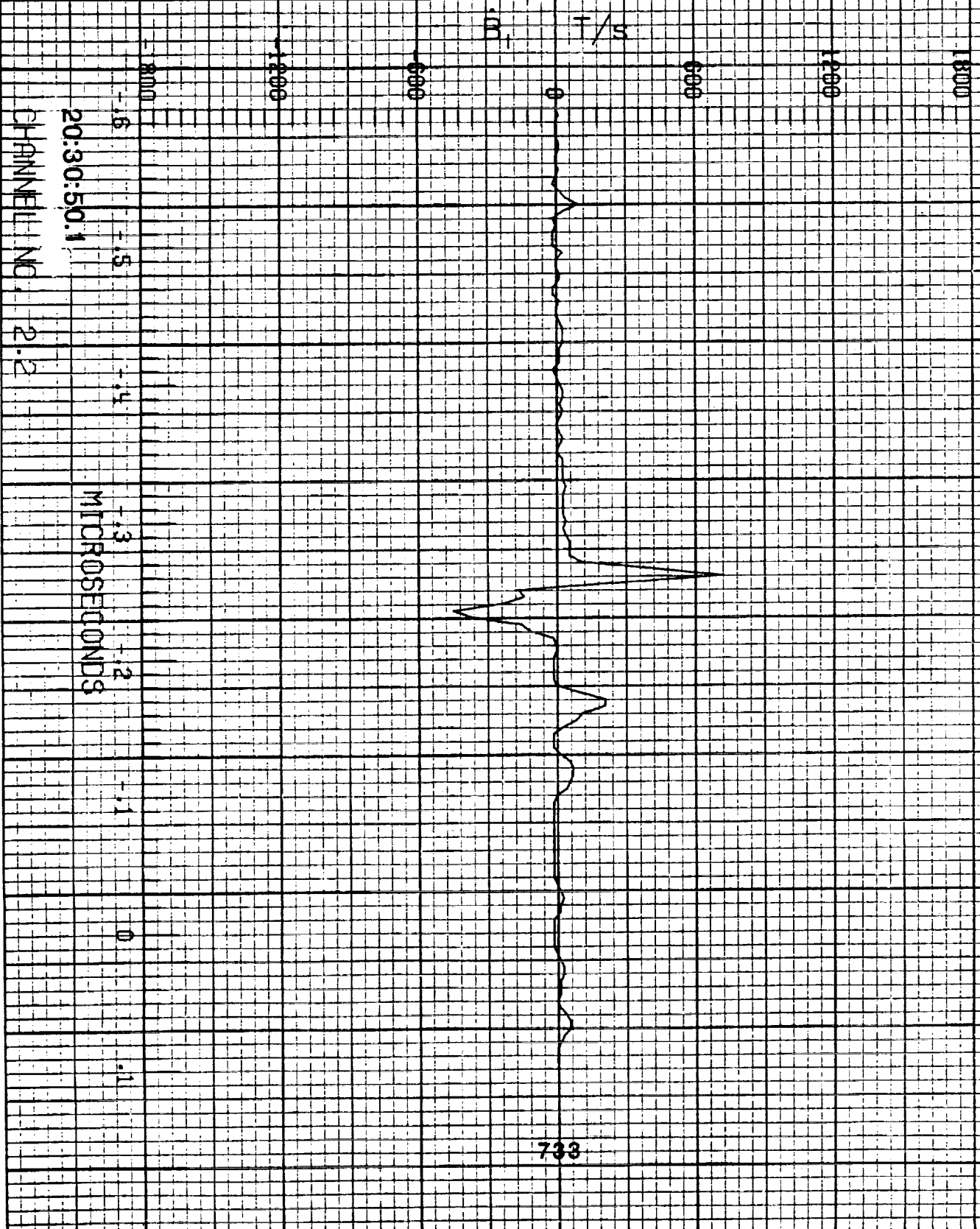
20:30:50.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

IFC2 RUN NO. 2



F-106 LIGHTNING/ 84-036

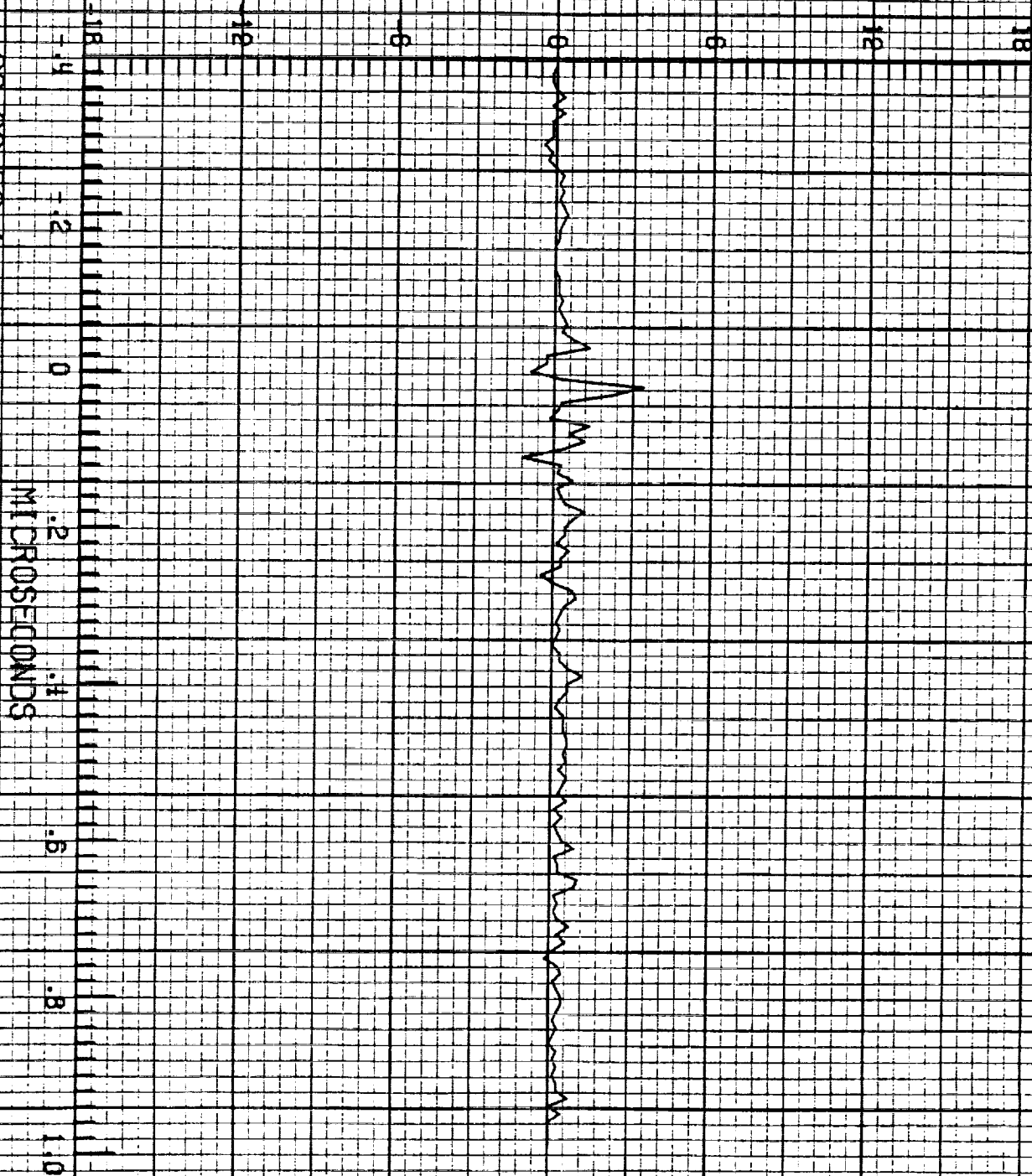
LEC 3 RUN NO. 2

S.00B

\dot{D}_{wr}

A/m^2

20:30:50.1
CHANNEL NO. 3-D



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 2

6.003

\hat{D}_w A/m²

20:30:50.1
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 2

S.003

D_r A/m^2

-12 -8 -4 0 4 8 12

-1.4

-2

0

.2

.4

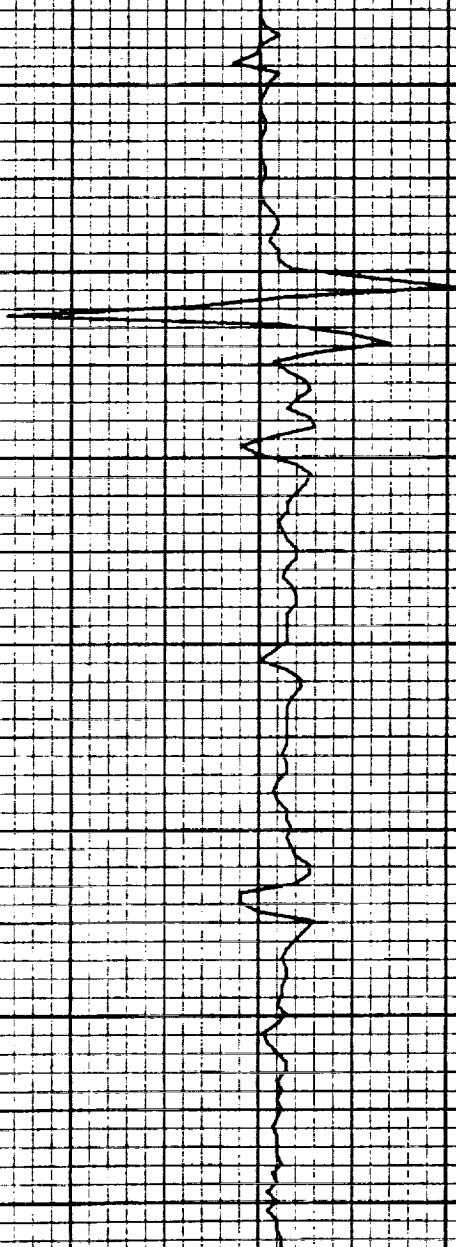
.6

.8

1.0

MICROSECONDS

20:30:50.1
CHANNEL NO. 3.2



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 4 RUN NO. 2

5.003

TP 100

V_w V



F-106 LIGHTNING/ 84-038

LEO 4 RUN NO. 2

3.003

TP 101

V_{fb}

V

60 50 40 30 20 10 0

-.6

-.5

-.4

-.3

-.2

-.1

0

.1

MICROSECONDS

20:30:50.1

CHANNEL NO. 4-1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 FC 4 RUN NO. 2

6.001

TP123

A

CHANNEL NO. #12

20:30:50.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEO1 RUN NO. 3

5.008

T_n A

20:33:24.1
CHANNEL NO. 1.1

MICROSECONDS

10 X 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 FC 1 RUN NO. 3

6.003

I, A

20:33:24.1
CHANNEL NO. 1.2

MICROSECONDS

F=106 LIGHTNING/ 84-036

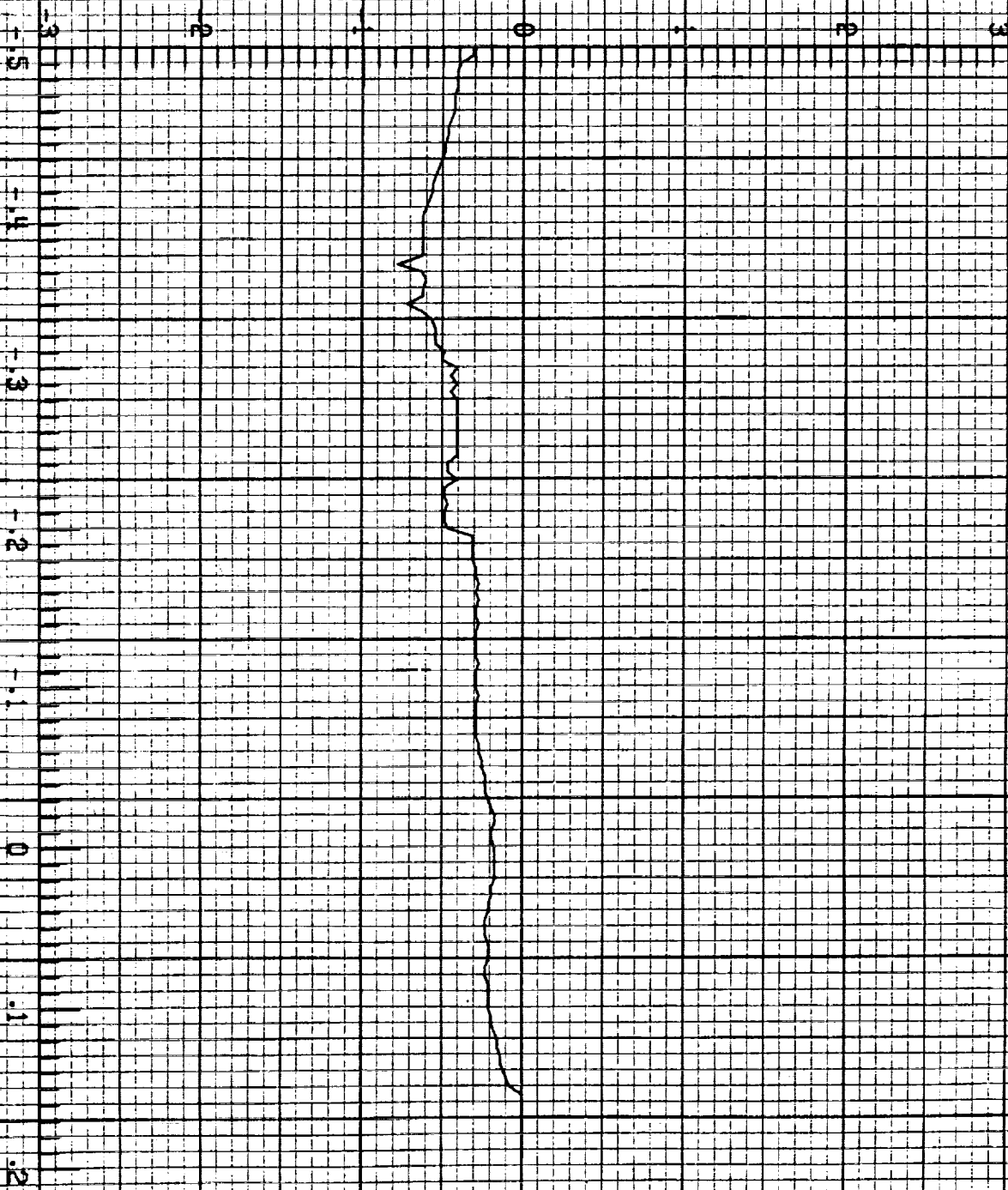
EC-2 RUN NO. 3

6.003

D_t A/m²

20:33:24.1
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 FC 2 RUN NO. 3

6.003

$\frac{1}{t}$ A/s

20:33:24.1
CHANNEL NO. 2.1

MICROSECONDS

24 x 10⁴

F-106 LIGHTNING/ 84-036

REC 2 RUN NO. 3

5.003

$\frac{dV}{dt}$ V/s

1800 1200 600 0 600 1200 1800

-5

-4

-3

-2

-1

0

.1

.2

MICROSECONDS

20:33:24.1
CHANNEL NO. 2.2



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LFC3 RUN NO. 3

6.003

\hat{D}_{wr} A/m²

20:33:24.1
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-036

FC3 RUN NO. 3

6.003

\bar{D}_{w1} A/m²

-1.8 -1.6 -1.4 -1.2 -1.0 -0.8 -0.6 -0.4 -0.2 0 .2 .4 .6 .8 1.0

20:33:24.1
CHANNEL NO. 3.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

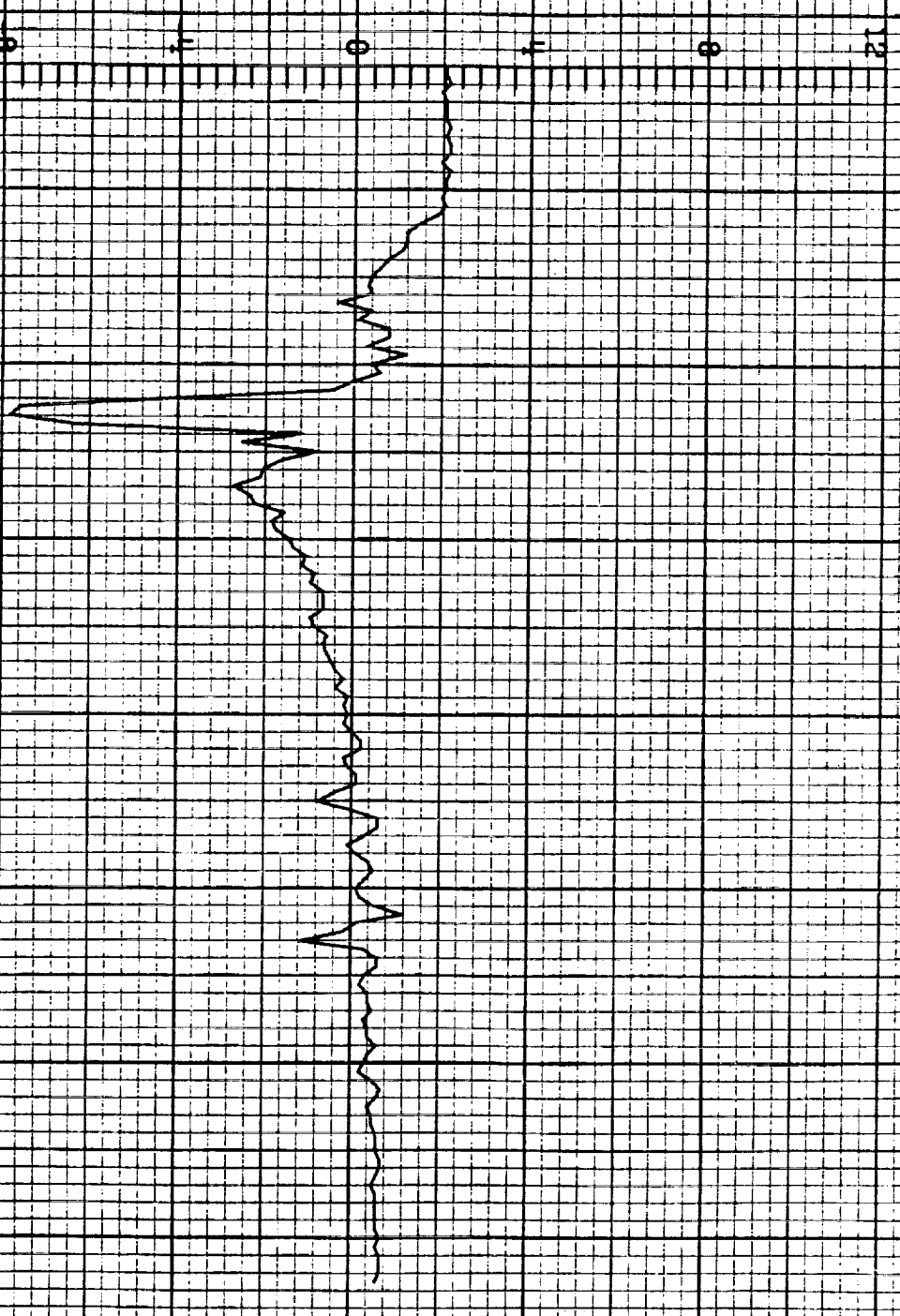
LEC.3 RUN NO. 3

5.003

D_r A/m²

20:33:24.1
CHANNEL NO. 3.2

MICROSECONDS



F-106 LIGHTNING/ 84-036

LEC# RUN NO. 3

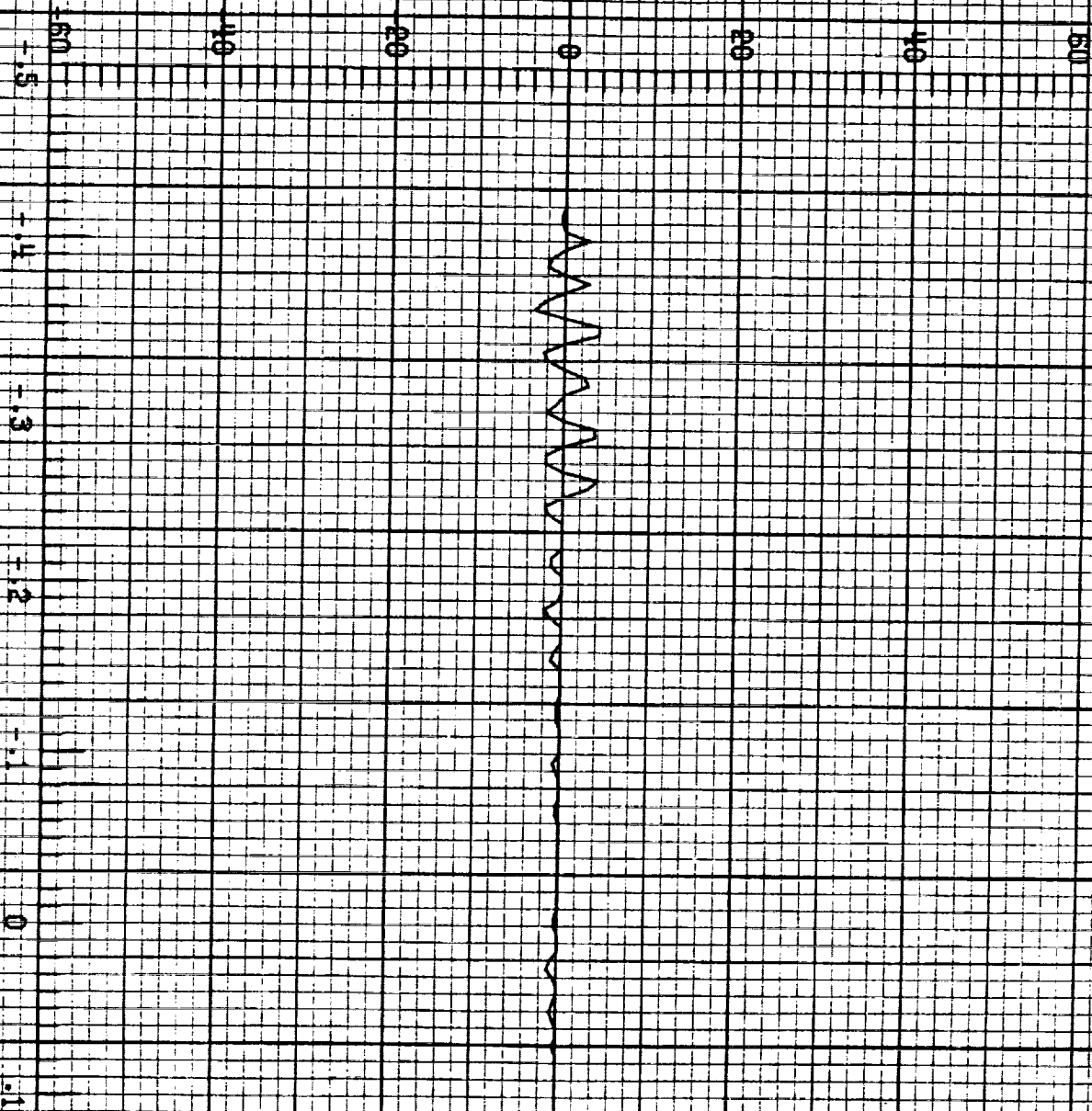
6.003

TP 100

V_w V

20:33:24.1
CHANNEL NO. 4.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LECH RUN NO. 3

5.003

TP 101

V_{fb} V

20:33:24.1
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

LECH RUN NO. 3

5.008

TP123

A

20:33:24.1
CHANNEL NO. 4.2

MICROSECONDS

750

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 1, RUN NO. 4

3.006

I_F A

21:17:26.7
CHANNEL NO. 1.1

MICROSECONDS

10^3

F-106 LIGHTNING/ 84-036

1 FC 1 RUN NO. 4

6.006

T_r A

21:17:26.7
CHANNEL NO. 1.2

MICROSECONDS

1.8
0
.8
1.6
2.4
3.2
4.0
4.8

1.6 x 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-038

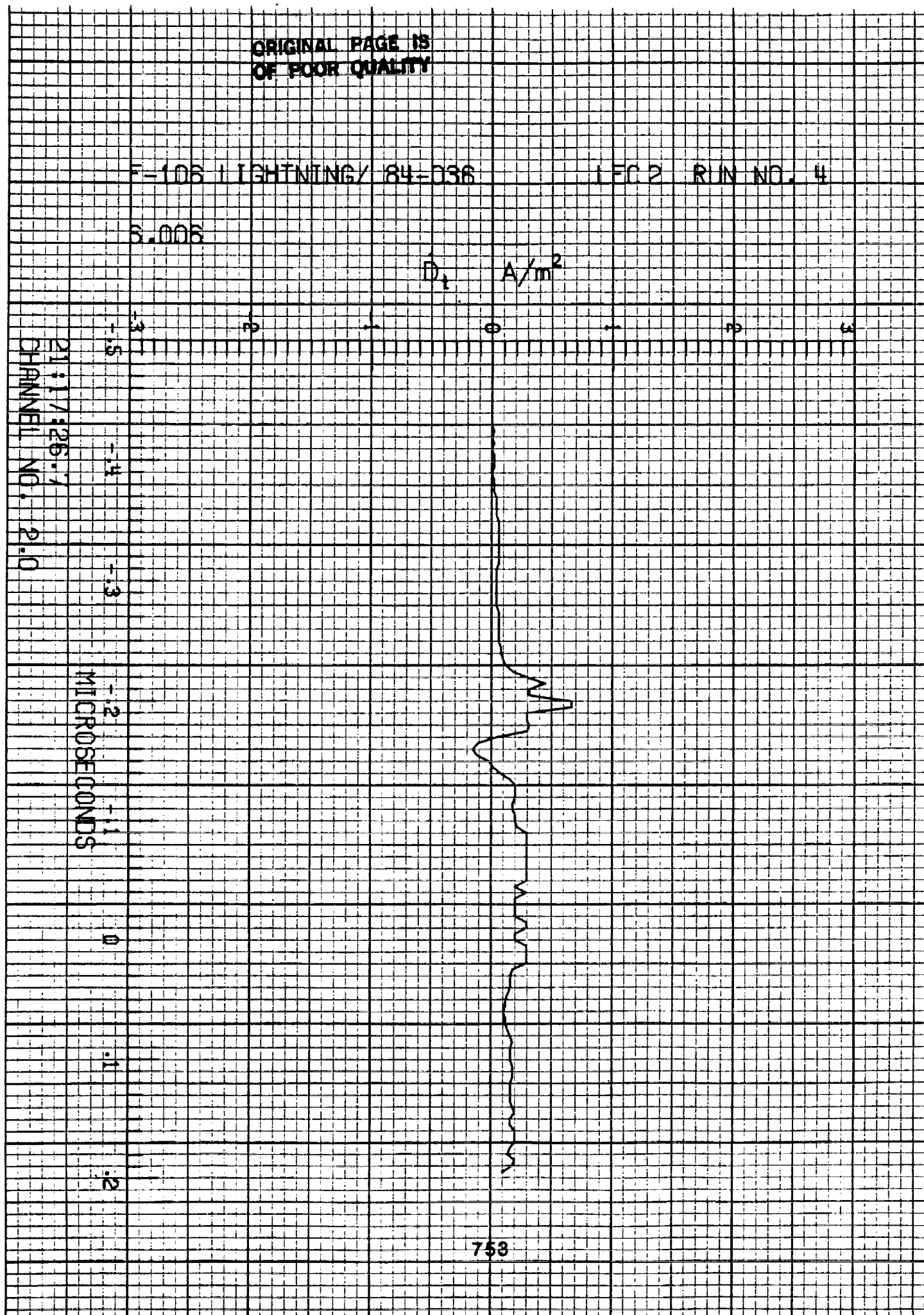
LEC 2 RUN NO. 4

6.006

D_t A/m^2

21:17:26.7
CHANNEL NO. 2.0

MICROSECONDS



F-106 LIGHTNING/ 84-036

IFC2 RUN NO. 4

3.006

\dot{I} A/s

25×10^{14}

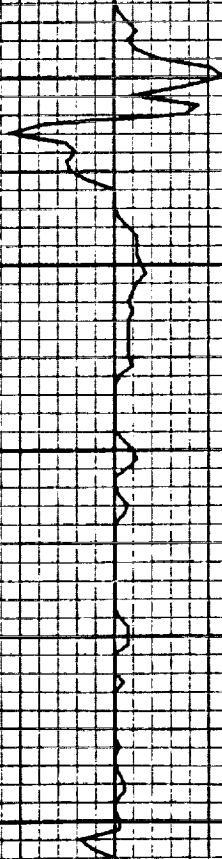
21:17:26.7
CHANNEL NO. 2.1

MICROSECONDS

1 FC 2 RUN NO. 4

 $\hat{B}_1 \quad T/s$

MICROSECONDS



F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 4

6.006

\dot{D}_{wr} A/m²

18 16 14 12 10 8 6 4 2 0 -2 -4 -6 -8 -10 -12

0

0

.2

.4

.6

.8

1.0

1.2

MICROSECONDS

21:17:26.1
CHANNEL NO. 3.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 4

5.006

\dot{D}_{wl} A/m^2

21:17:26.7
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-036

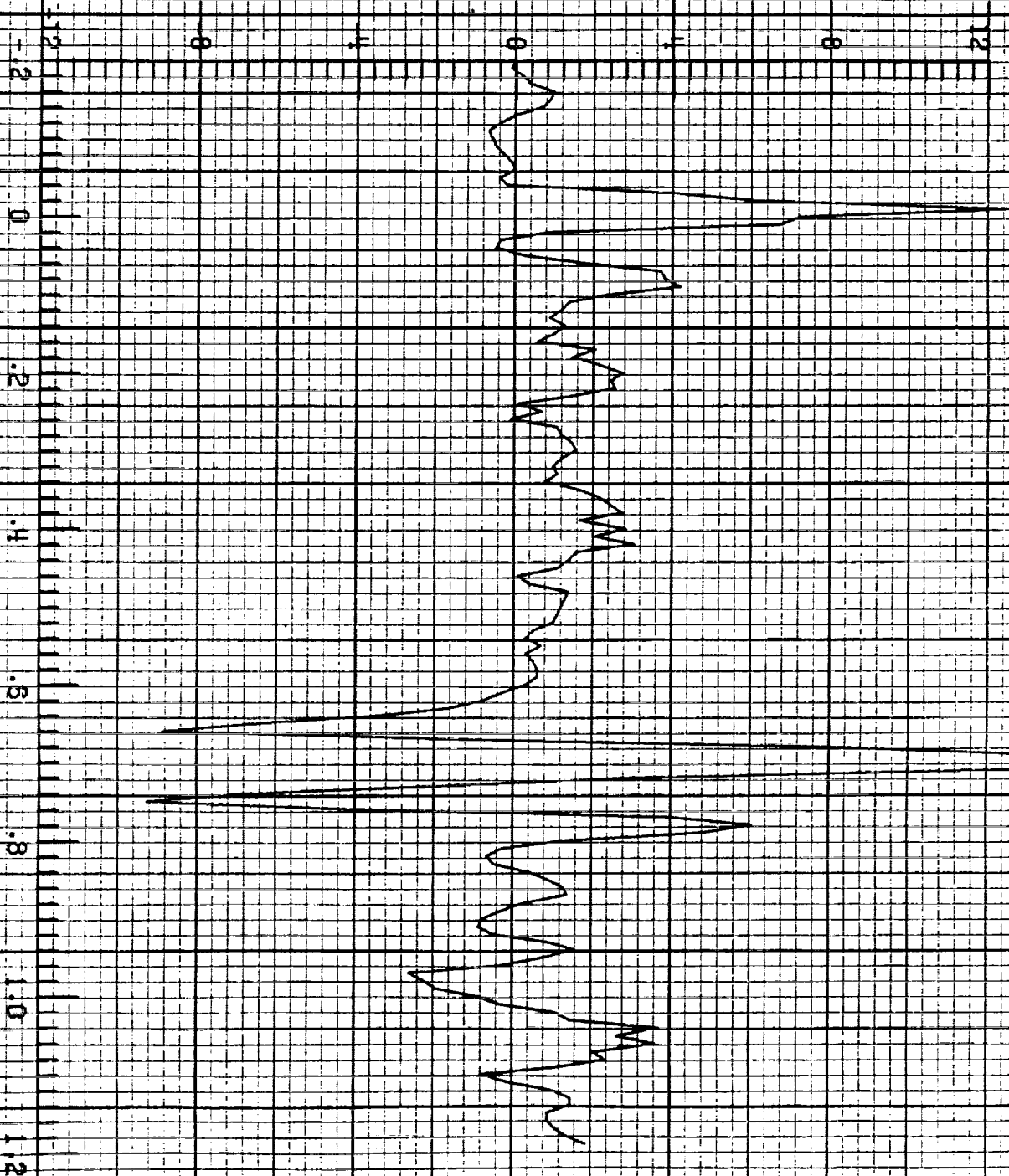
LEC3 RUN NO. 4

6.006

D_r A/m²

21:17:26.7
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC # RUN NO. 4

3.006

TP 100

V_w V

21:17:26.7
CHANNEL NO. 4.C

MICROSECONDS

F-106 LIGHTNING/ 84-036

1 FC 4 RUN NO. 4

6.006

TP 101

V₁₀

V

60 50 40 30 20 10 0

-15

-14

-13

-12

-11

0

.1

.2

MICROSECONDS

21:17:26.7
CHANNEL NO. 4.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 4 RUN NO. 4

6.006

TP123 A

21:17:26.7
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 1 RUN NO. 5

6.008

I_{A}

18 x 10³

21:20:57.3
CHANNEL NO. 1.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-D36

LEC 1 RUN NO. 5

5.008

I_t A

21:20:57.3
CHANNEL NO. 1.2

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 2 RUN NO. 5

5.008

\dot{D}_t A/m²

21:20:57.3
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-036

1 FC 2 RUN NO. 5

6.008

ORIGINAL PAGE IS
OF POOR QUALITY

\dot{I} A/s

21:20:57.3
CHANNEL NO. 2.1

MICROSECONDS

24 x 10¹⁴

F-106 LIGHTNING/ 84-036

LEO 2 RUN NO. 5

6.008

\hat{B}_1 T/s

1800
1200
600
0
-600
-1200
-1800

-.3

-.2

-.1

0

.1

.2

.3

.4

MICROSECONDS

21:20:57.3
CHANNEL NO. 2.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 5

6.008

\hat{D}_{WT} A/m^2

21:20:57.3
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 5

S.008

\dot{D}_w

A/m^2

18 16 14 12 10 8 6 4 2 0 -2 -4 -6 -8 -10 -12 -14 -16 -18

0

.2

.4

.6

.8

1.0

1.2

MICROSECONDS

21:20:57.3
CHANNEL NO. 3.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 FC 3 RUN NO. 5

5.008

\vec{D}_r A/m²

21:20:57.3
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-036

LEC 4 RUN NO. 5

5.008

TP 100

V_w V

21:20:57.3
CHANNEL NO. 4.0

MICROSECONDS

770

F-106 LIGHTNING/ 84-036

LEC 4 RUN NO. 5

5.008

TP 101

V_{fb} V

21:20:57.3
CHANNEL NO. 4.1

MICROSECONDS

F-105 LIGHTNING/ 84-036

LECH RUN NO. 5

6.008

TP123

A

21:20:57.3
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

1 EC 1 RUN NO. 6

5.000

I_n A

21:31:11.0
CHANNEL NO. 1.1

MICROSECONDS

10×10^3

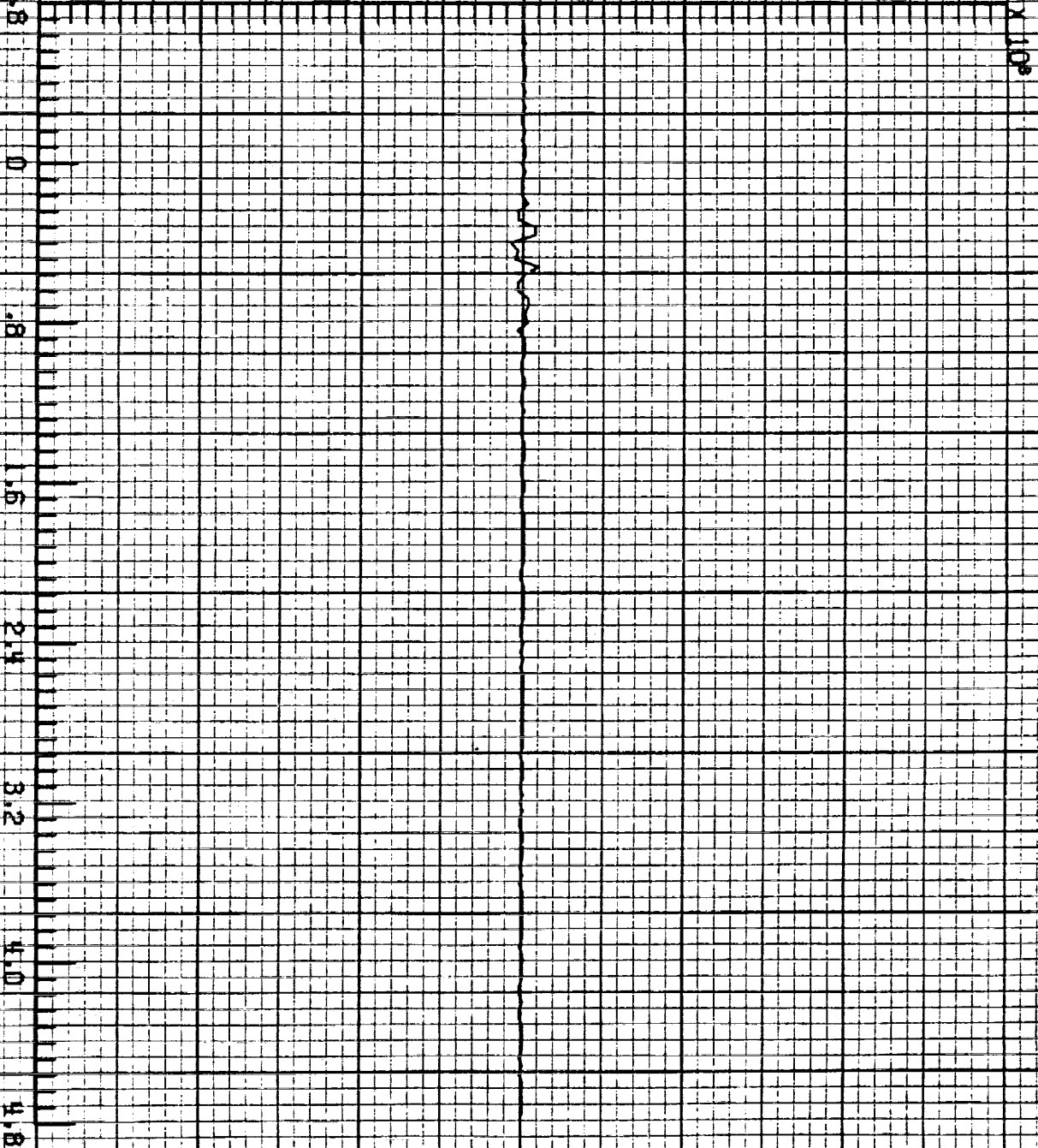
F-106 LIGHTNING/ 84-036

LEC 1 RUN NO. 6

6.000

I₁ A

18 x 10³
12
6
0
-6
-12
-18



21:31:11.0
CHANNEL NO. 1.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

LEC 2 RUN NO. 6

5.000

D_1 A/m^2

21:31:11.0
CHANNEL NO. 2.0

MICROSECONDS

F-105 LIGHTNING/ 84-036

LEC 2 RUN NO. 6

6.000

\dot{I} A/s

24 X 10¹⁰

21:31:11.0
CHANNEL NO. 2-1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-036

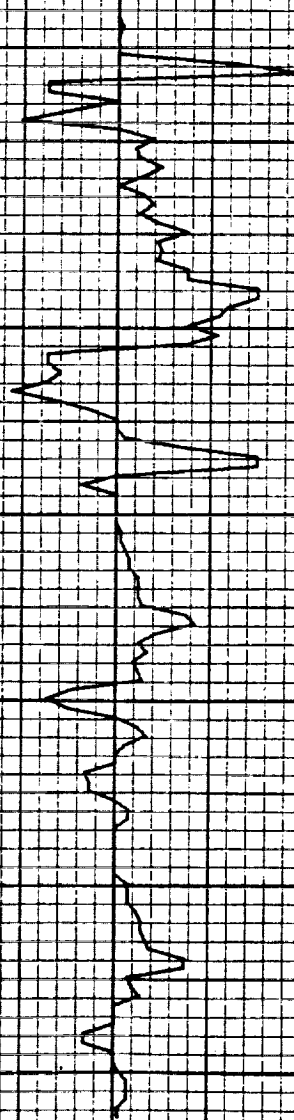
LEC 2 RUN NO. 6

5.000

\dot{D}_1 T/s

21:31:11.0
CHANNEL NO. 2.2

MICROSECONDS



-106 LIGHTNING/ 84-036

LEC 3 RUN NO. 6

0.008

\dot{D}_{wr} A/m²

-18 -12 -6 0 6 12 18

-2

0

.2

.4

.6

.8

1.0

1.2

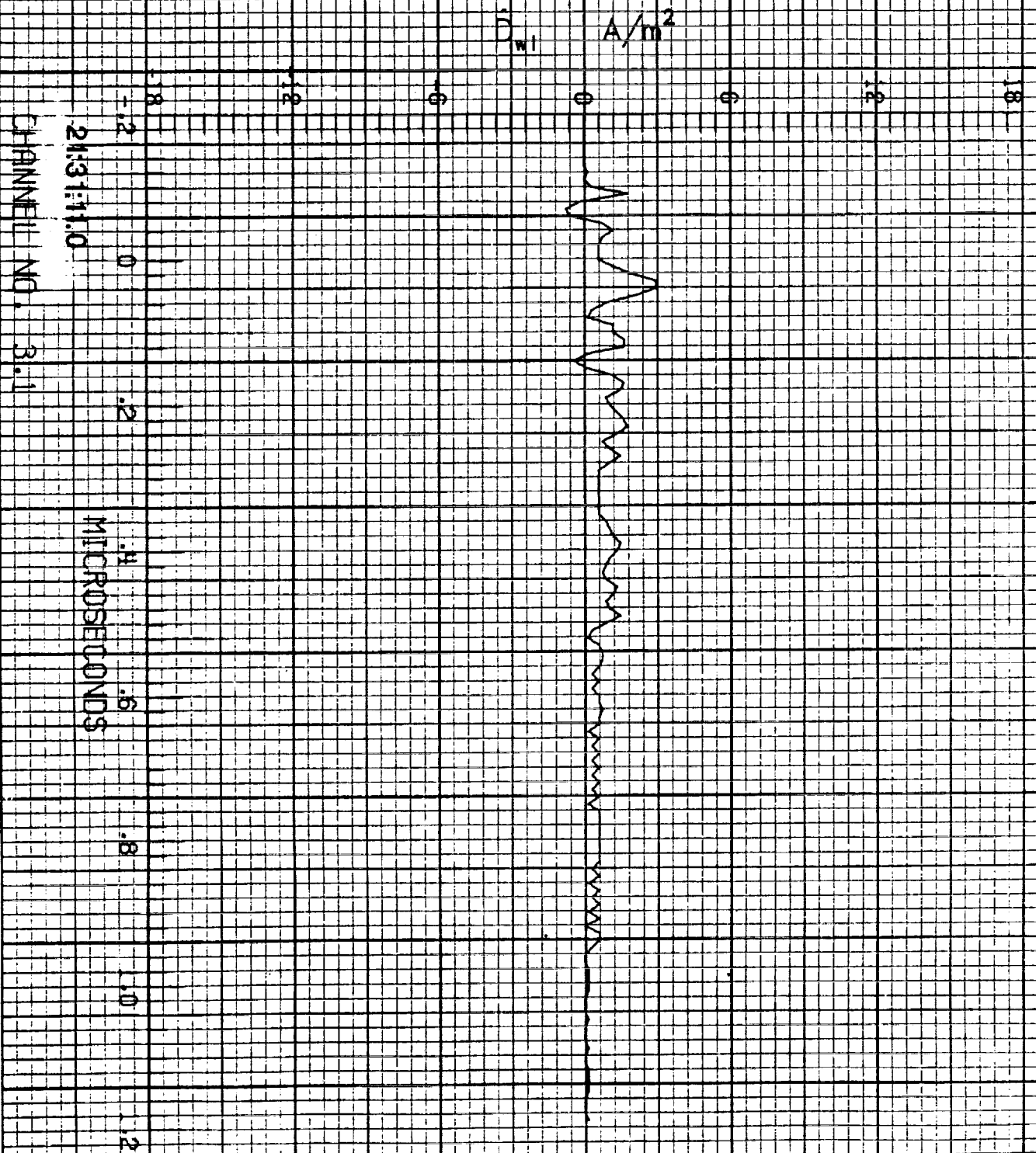
MICROSECONDS

21:31:11.0
CHANNEL NO. 3.0

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-038

LECS RUN NO. 8



F-106 LIGHTNING/ 84-036

EC-3 RUN NO. 6

D_r A/m²

CHANNEL NO. 3-2

21:31:10

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-036

1 FC 4 RUN NO. 6

5.000

TP 100

V_w V

21:31:11.0
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-036

LECH RUN NO. 6

5.000

TP 101

V_{fb} V

60 40 20 0 20 40 60

-.5

-.4

-.3

-.2

-.1

0

.1

.2

MICROSECONDS

21:31:11.0

CHANNEL NO. 4.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-105 LIGHTNING/ 84-036

LEC 4 RUN NO. 6

S.003

TP123 A

21:31:11.0
CHANNEL NO. 4.2

MICROSECONDS

E-106 LIGHTNING/ 84-037

LFC 1 RUN NO. 1

3.015

T_u A

10 x 10³

19:33:03.1
CHANNEL NO. 1.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 1

5.015

T₁ A

19:33:03.1
CHANNEL NO. 1.2

MICROSECONDS



F-106 LIGHTNING/ 84-037

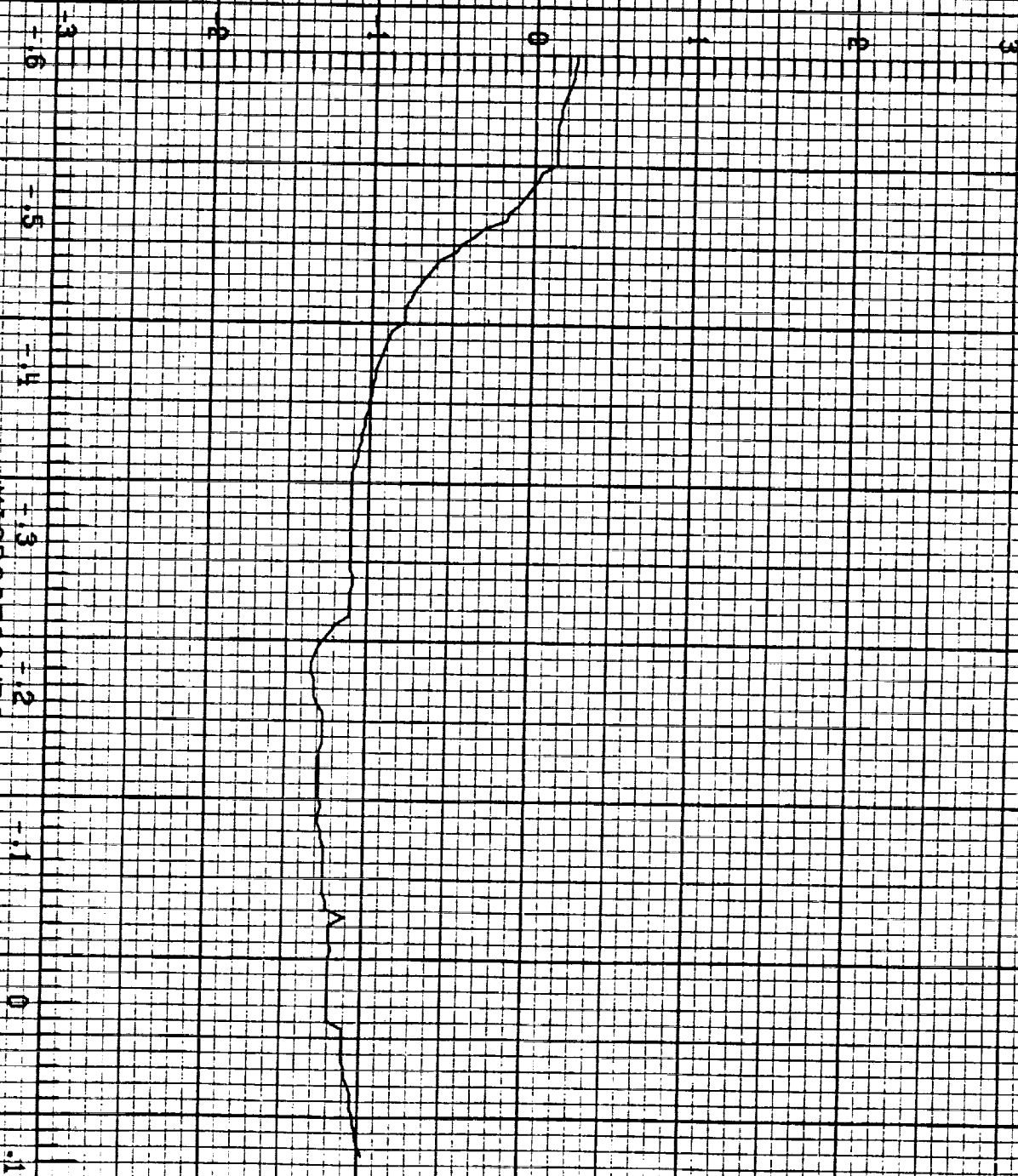
1 FC 2 RUN NO. 1

5.015

D_1 A/m²

19:33:03.1
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 2 RUN NO. 1

3.015

\bar{I} A/s

19:33:03.1
CHANNEL NO. 2.1

MICROSECONDS

2.4×10^{-4}

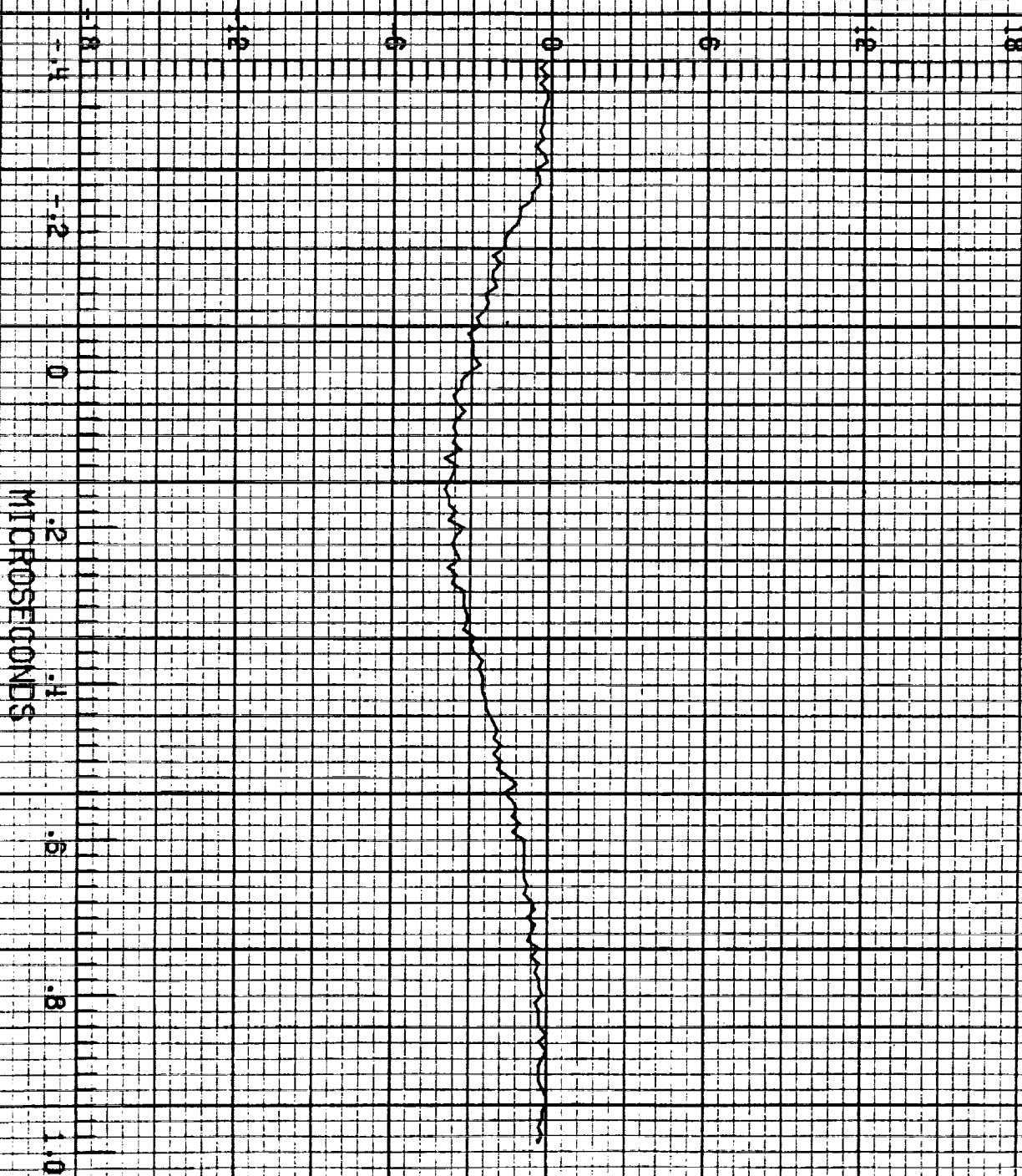
F=106 LIGHTNING/ 84-037

LECS RUN NO. 1

6.015

\bar{D}_{wr} A/m²

19:33:03.1
CHANNEL NO. 3.0



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECS RUN NO. 1

6.015

\bar{D}_w A/m²

18 16 14 12 10 8 6 4 2 0

1.4 1.2 1.0 0.8 0.6 0.4 0.2 0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

19:38:03.1
CHANNEL NO. 3.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

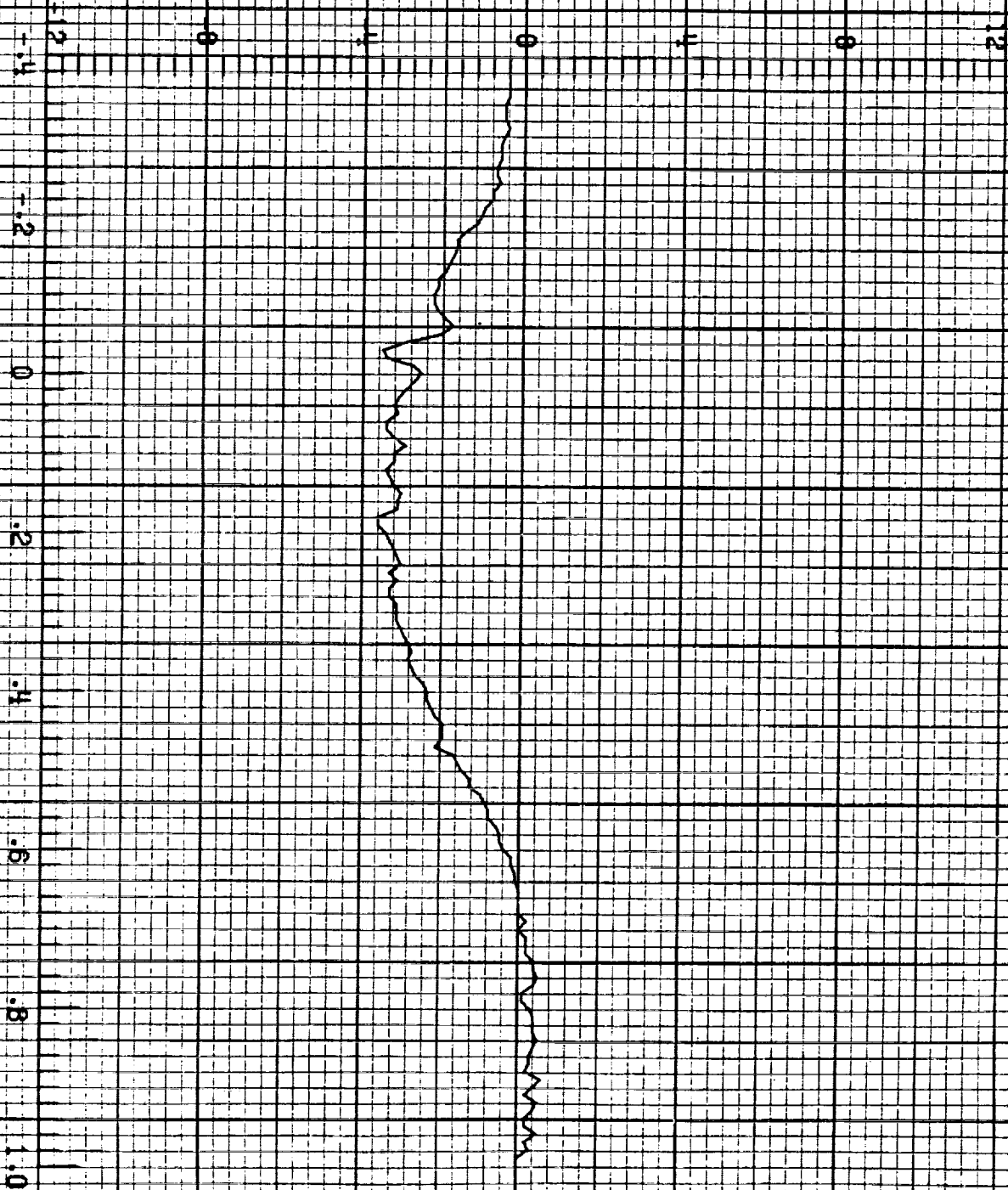
LFC3 RUN NO. 1

6.015

D_r A/m²

19:33:03.1
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

EC4 RUN NO. 1

5.015

TP 101

V₁₀

V

19:33:03.1
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LECH RUN NO. 1

6.015

TP123

A

19:33:03.1
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 2

5.018

I_{A}

19:34:13.6
CHANNEL NO. 11.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC1 RUN NO. 2

6.018

I_t A

10 x 10³

19:34:13.8
CHANNEL NO. 1.2

1.6
2.4
3.2
4.0
4.8
MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

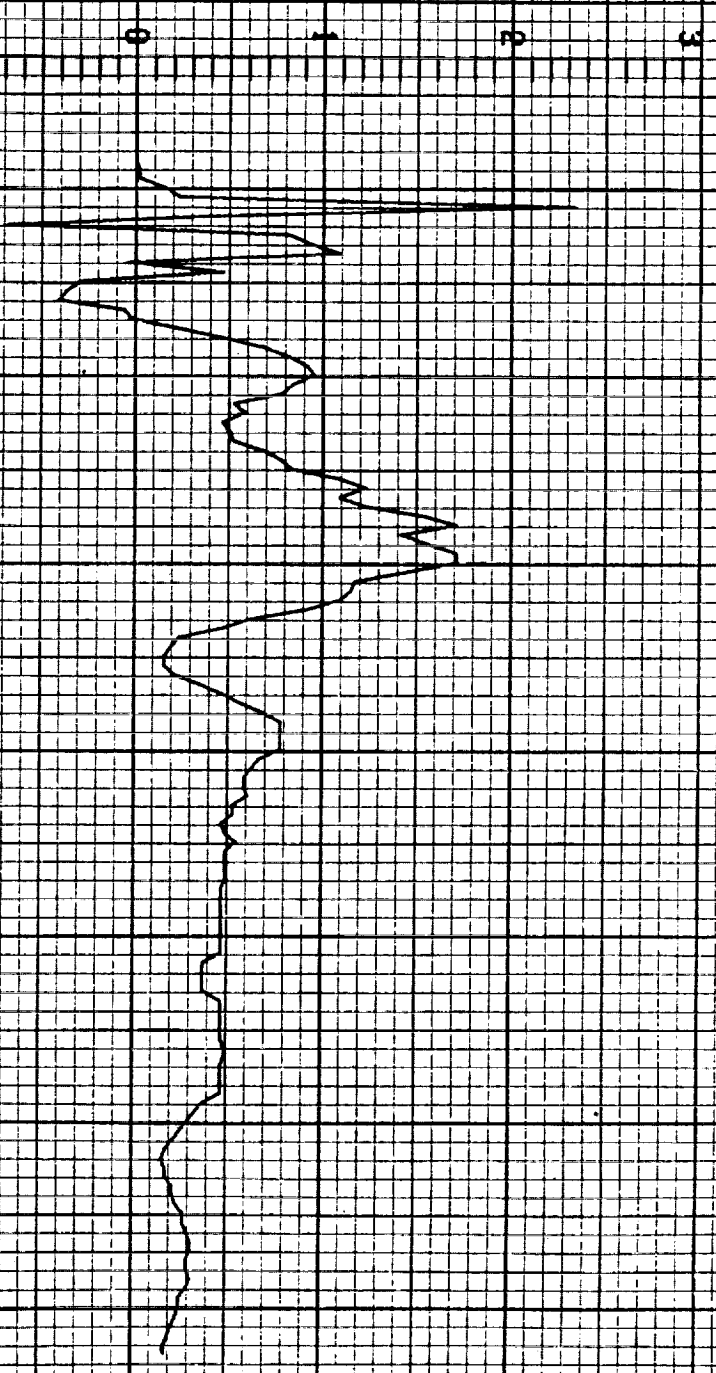
LEC 2 RUN NO. 2

5.018

\dot{D}_t A/m²

19:34:13.8
CHANNEL NO. 2.C

MICROSECONDS



F=108 LIGHTNING/ 84-037

LECD RUN NO. 2

3.018

I A/s

24 x 10¹⁴

-0.3

-0.2

-0.1

0

.1

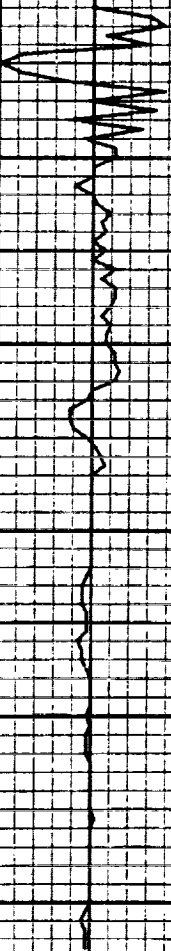
.2

.3

.4

MICROSECONDS

19:34:13.8
CHANNEL NO. 2.1



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

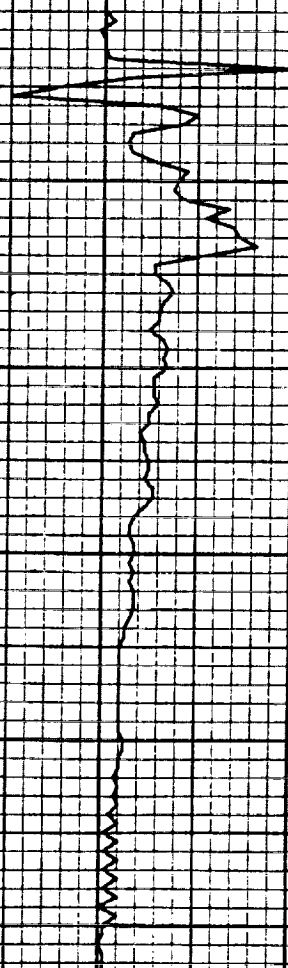
LEC 3 RUN NO. 2

6.018

\bar{D}_{wl} A/m^2

19:38:13.6
CHANNEL NO. 3.1

MICROSECONDS



F-106 LIGHTNING/ 84-037

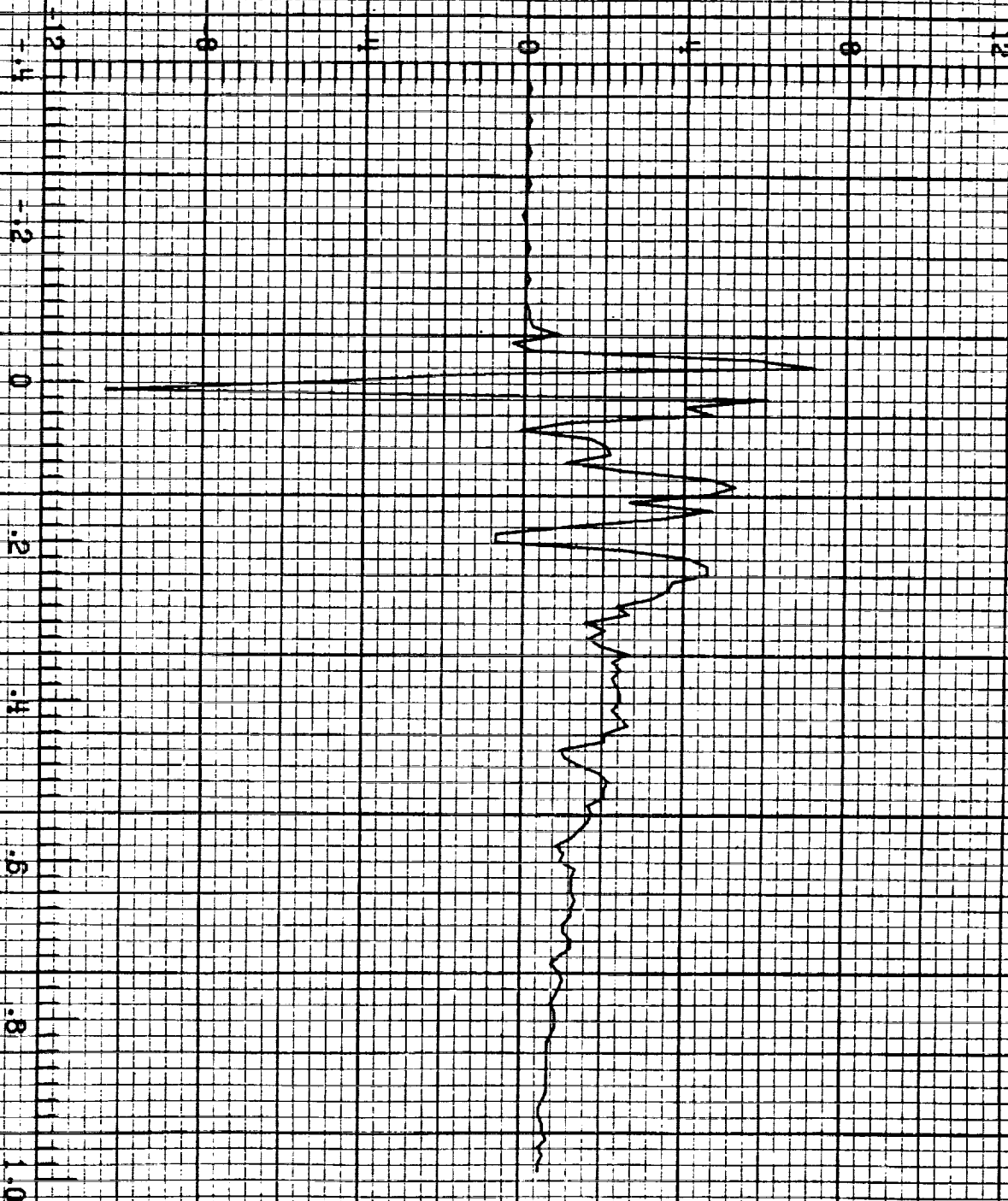
IFC3 RUN NO. 2

6.018

D_r A/m²

19:34:13.6
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECH RUN NO. 2

5.018

TP 100

V_w V

19:34:13.8
CHANNEL NO. 4.0

MICROSECONDS

C-4

E=106 LIGHTNING/ 84-037

LECH RUN NO. 2

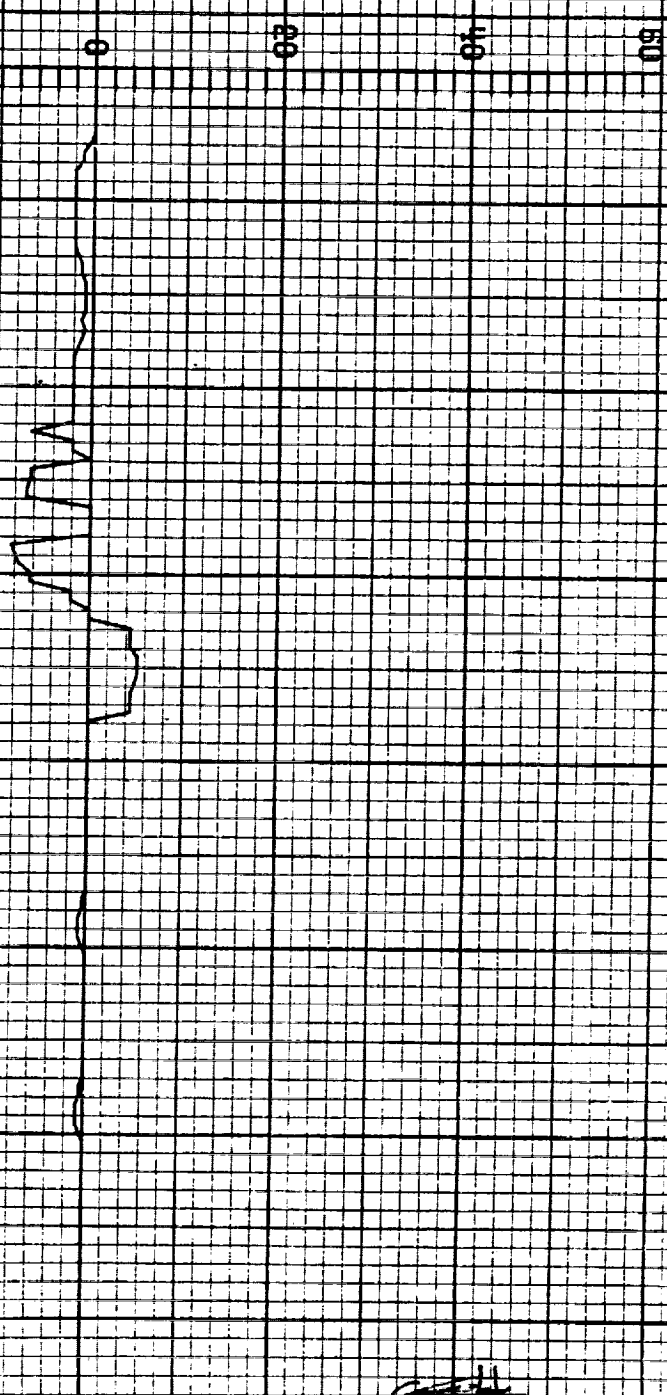
5.018

TP 101

V_{fb} V

19:34:13.6
CHANNEL NO. 4.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 4 RUN NO. 2

TP123 A

19:34:13.6
CHANNEL NO.

4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 3

6.022

I_{m} A

19:38:56.8
CHANNEL NO. 1.1

MICROSECONDS

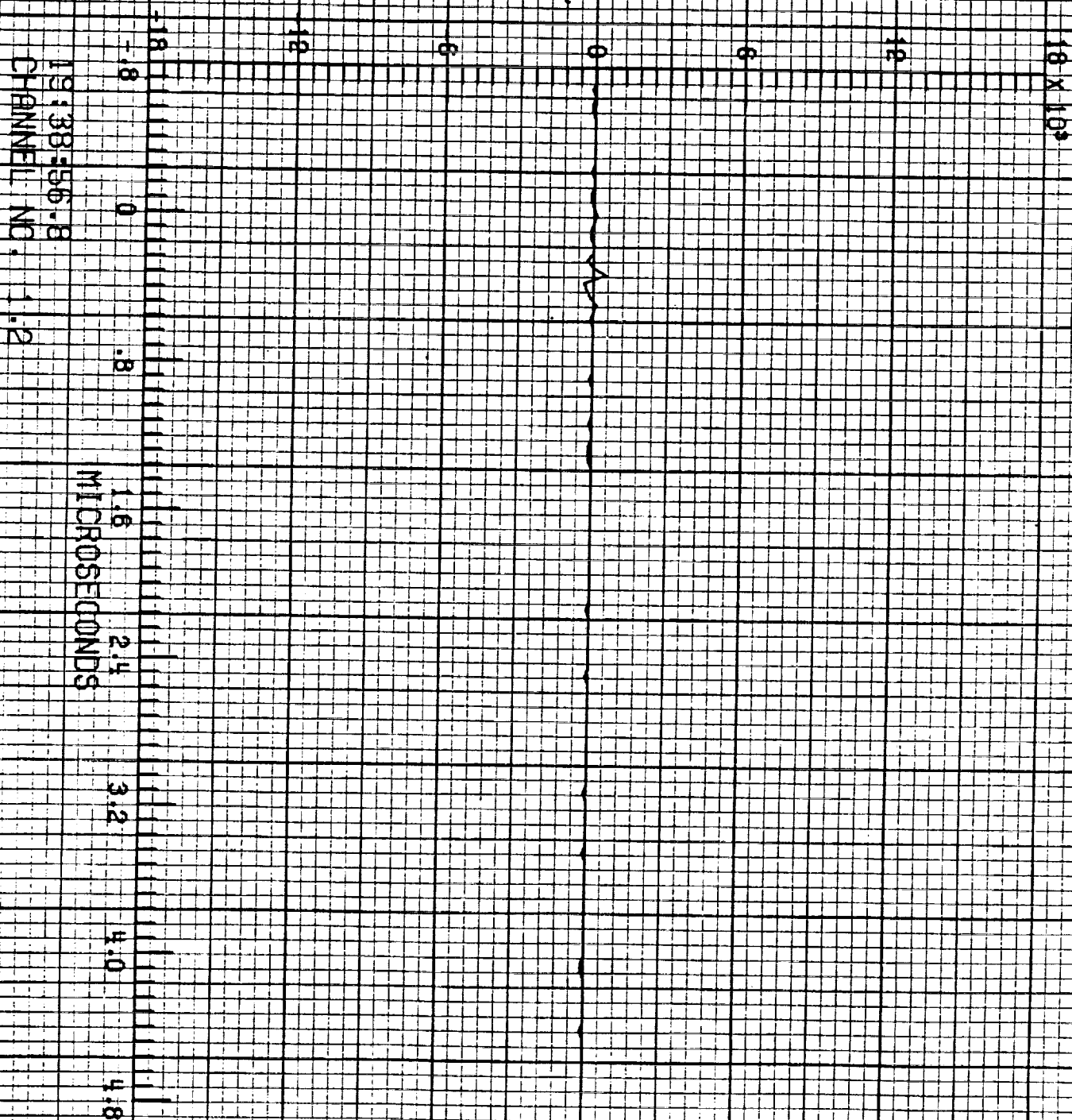
10×10^3

F-106 LIGHTNING/ 84-037

LFC1 RUN NO. 3

S.022

I_t A



F-106 LIGHTNING/ 84-037

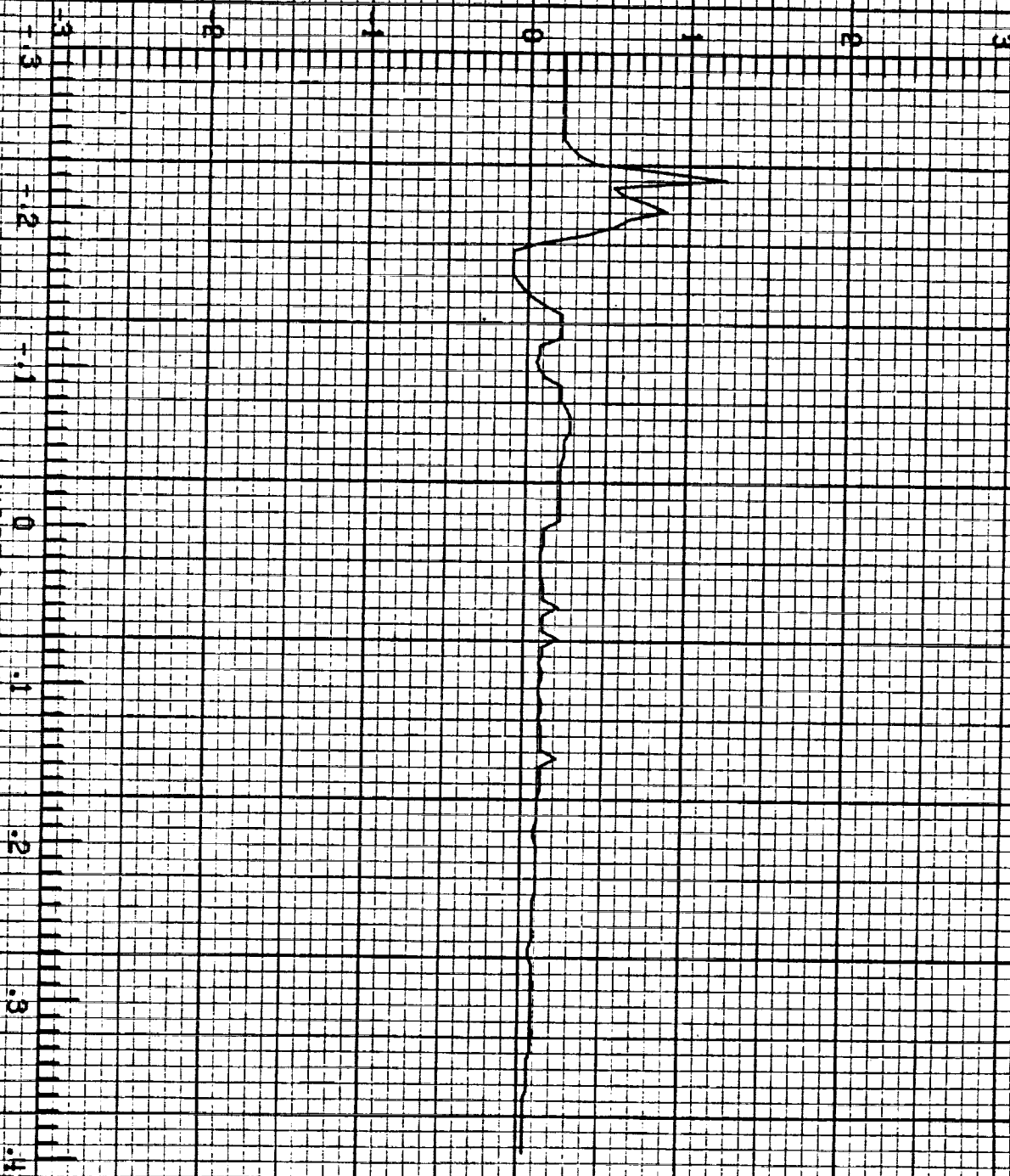
LFC2 RUN NO. 3

6.022

D_1 A/m²

19:38:56.8
CHANNEL NO. 2.0

MICROSECONDS



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 3

6.022

I A/s

24 X 10¹⁴

19:38:56.8
CHANNEL NO. 2.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

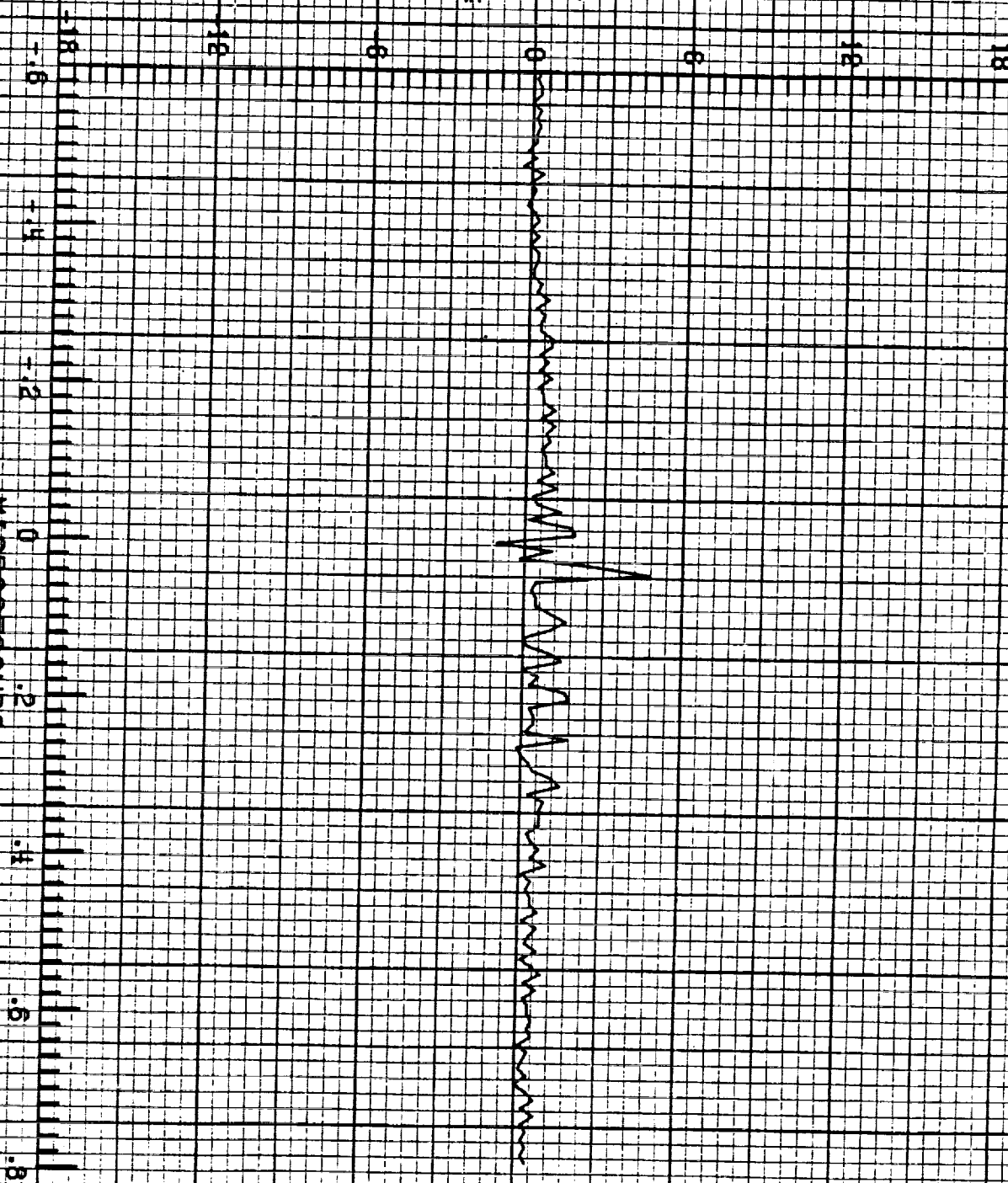
LEC 3 RUN NO. 3

S-022

\dot{D}_{wr} A/m²

19:38:56.8
CHANNEL NO. 3.0

MICROSECONDS



F=106 LIGHTNING/ 84-037

LEC 3 RUN NO. 3

3.022

D_w

A/m^2

19:38:56.8
CHANNEL NO. 3.1

MICROSECONDS

807

F-106 LIGHTNING/ 84-037

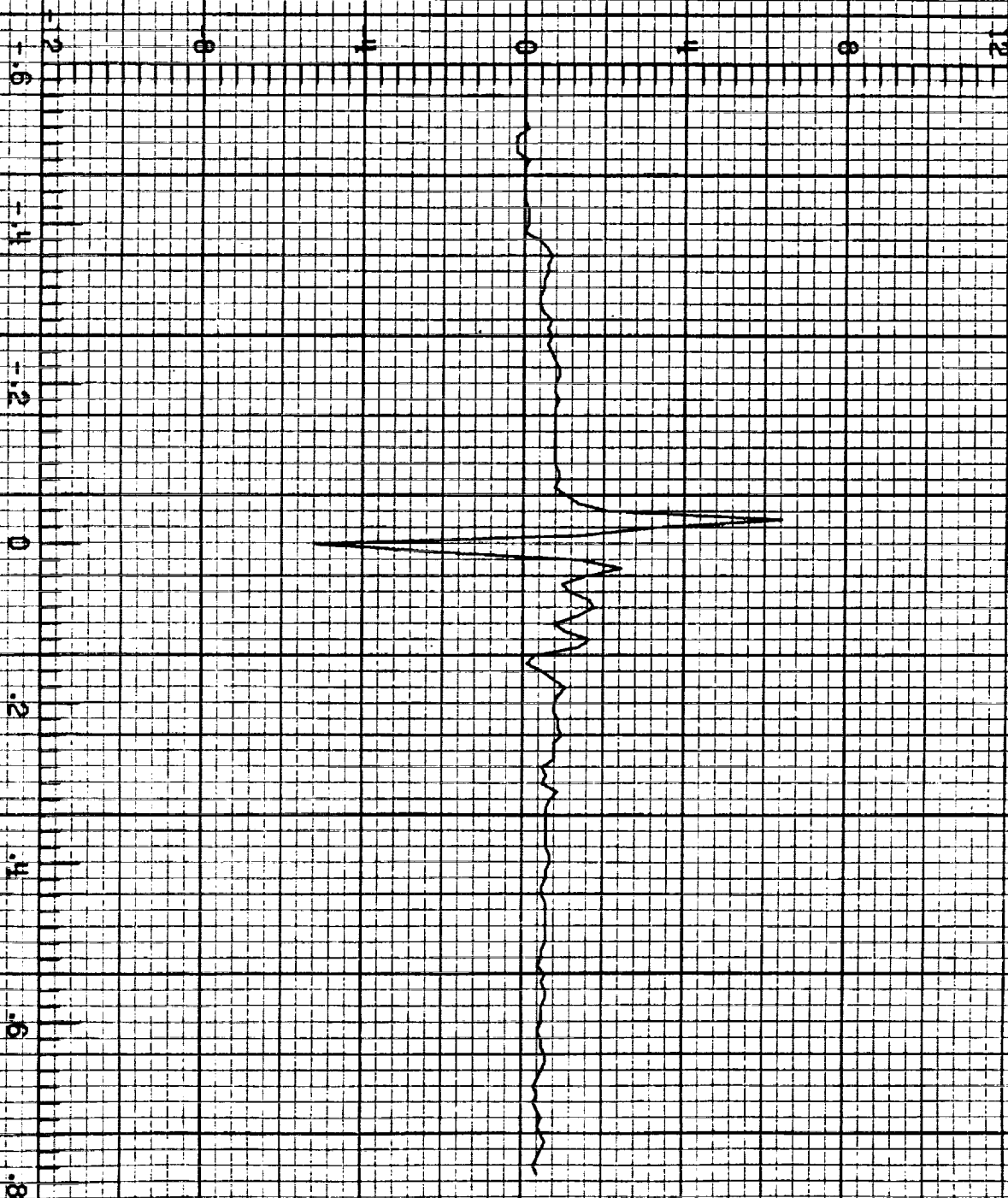
LEC3 RUN NO. 3

6.022

$$\dot{D}_r \quad \text{A/m}^2$$

19:38:56.8
CHANNEL NO. 3.2

MICROSECONDS



F-106 LIGHTNING/ 84-037

LEO4 RUN NO. 3

8.022

TP 100

V_w V

19:38:55.8
CHANNEL NO. 4.0

MICROSECONDS

809

F-106 LIGHTNING/ 84-037

LEC4 RUN NO. 3

6.022

TP 101

V_{fb}

V

60 40 20 0 20 40 60

-0.3

-0.2

-0.1

0

.1

.2

.3

.4

MICROSECONDS

19:38:56.8
CHANNEL NO. 4.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 3

5-022

TP123 A

19:38:56.8
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 4

6.024

I_n A

18 x 10³

19:39:15.1
CHANNEL NO. 1.1

MICROSECONDS

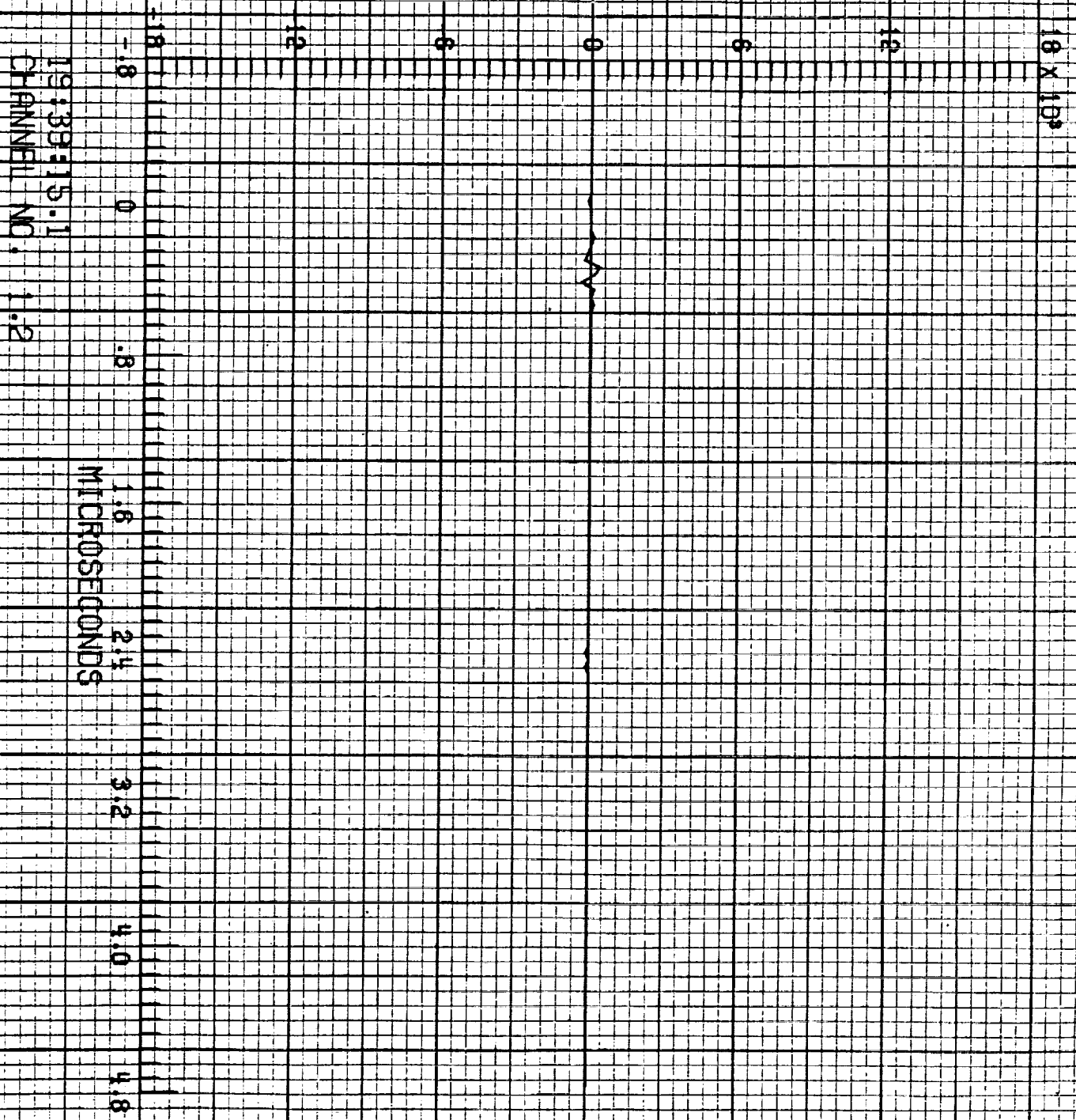
ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

EC 1 RUN NO. 4

6.024

I_t A



F-106 LIGHTNING/ 84-037

IFC2 RUN NO. 4

5.024

D_1 A/m²

-3 -2 -1 0 1 2 3

-.6

-.5

-.4

-.3

-.2

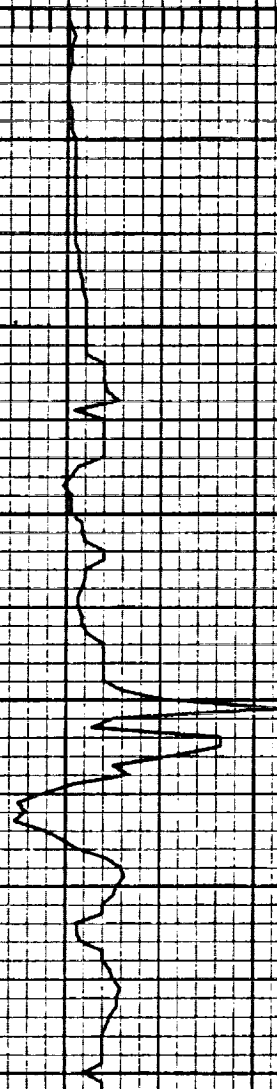
-.1

0

.1

MICROSECONDS

19:39:15.1
CHANNEL NO. 2.0



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 2 RUN NO. 4

6.024

\dot{I} A/s

19:39:15.1
CHANNEL NO. 2.1

MICROSECONDS

24 X 10¹⁰

F-106 LIGHTNING/ 84-037

LECS RUN NO. 4

6.024

\hat{D}_{WT} A/m²

19:39:15.1
CHANNEL NO. 3.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEF 3 RUN NO. 4

8.024

\dot{D}_w A/m²

19:39:15.1
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

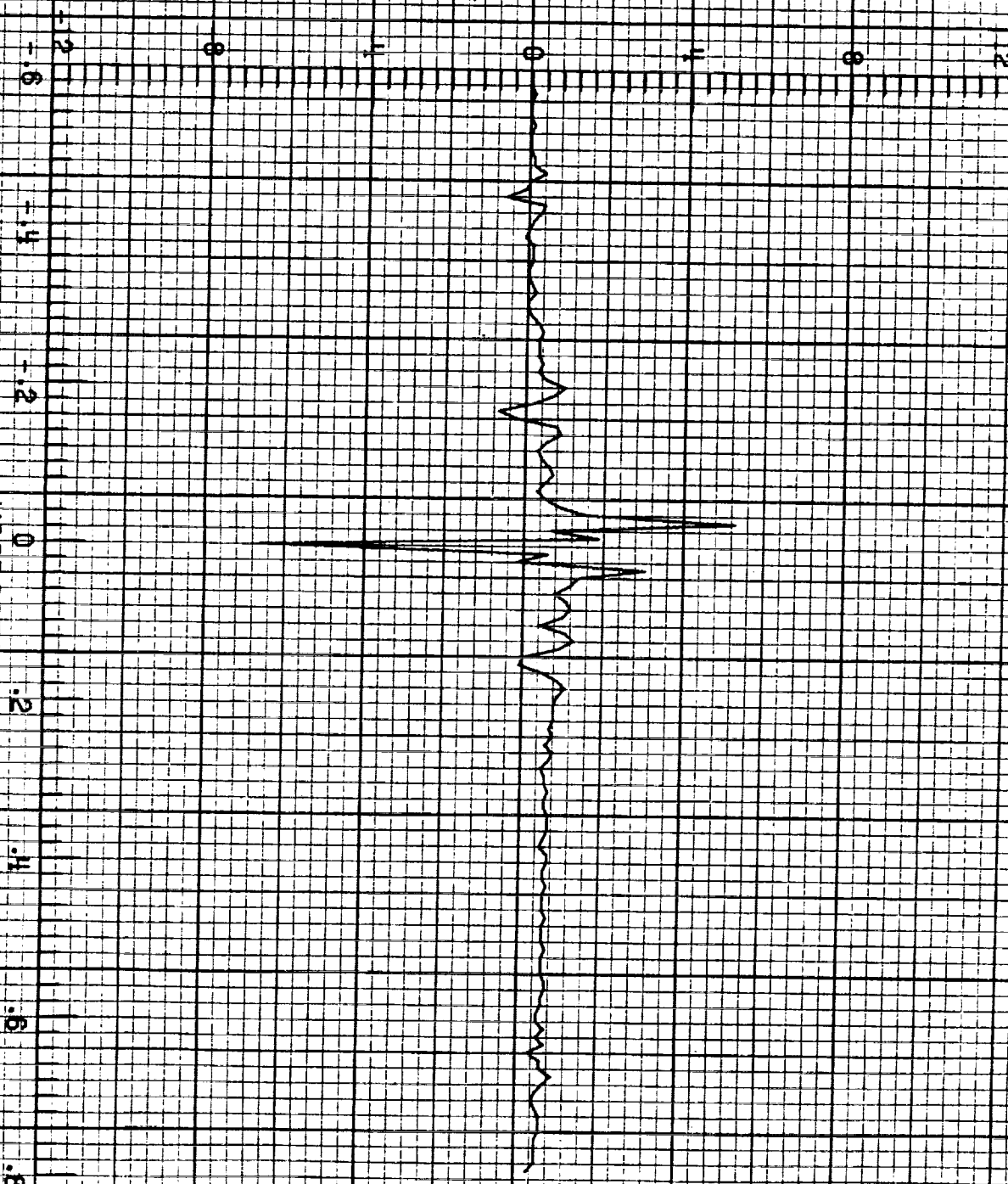
LECS RUN NO. 4

5.024

\dot{D}_r A/m²

19:39:15.1
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECH RUN NO. 4

S.024

TP 100

V_w V

19:39:15.1
CHANNEL NO. 4.0

MICROSECONDS

F=106 LIGHTNING/ 84-037

IFC 4 RUN NO. 4

S.024

TP 100

V_{fo} V

60 40 20 0 20 40 60

-6

-5

-4

-3

-2

-1

0

.1

MICROSECONDS

19:39:15.1
CHANNEL NO. 4.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

IFC# RUN NO. 4

6.024

TP123

A

19:39:15.1
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

IFC 1 RUN NO. 5

6.029

I_n A

19:39:38.6
CHANNEL NO. 1.1

MICROSECONDS

10 x 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEF 1 RUN NO. 5

6.029

I_t A

19:39:38.8
CHANNEL NO. 1.2

MICROSECONDS

10×10^3

E-106 LIGHTNING/ 84-037

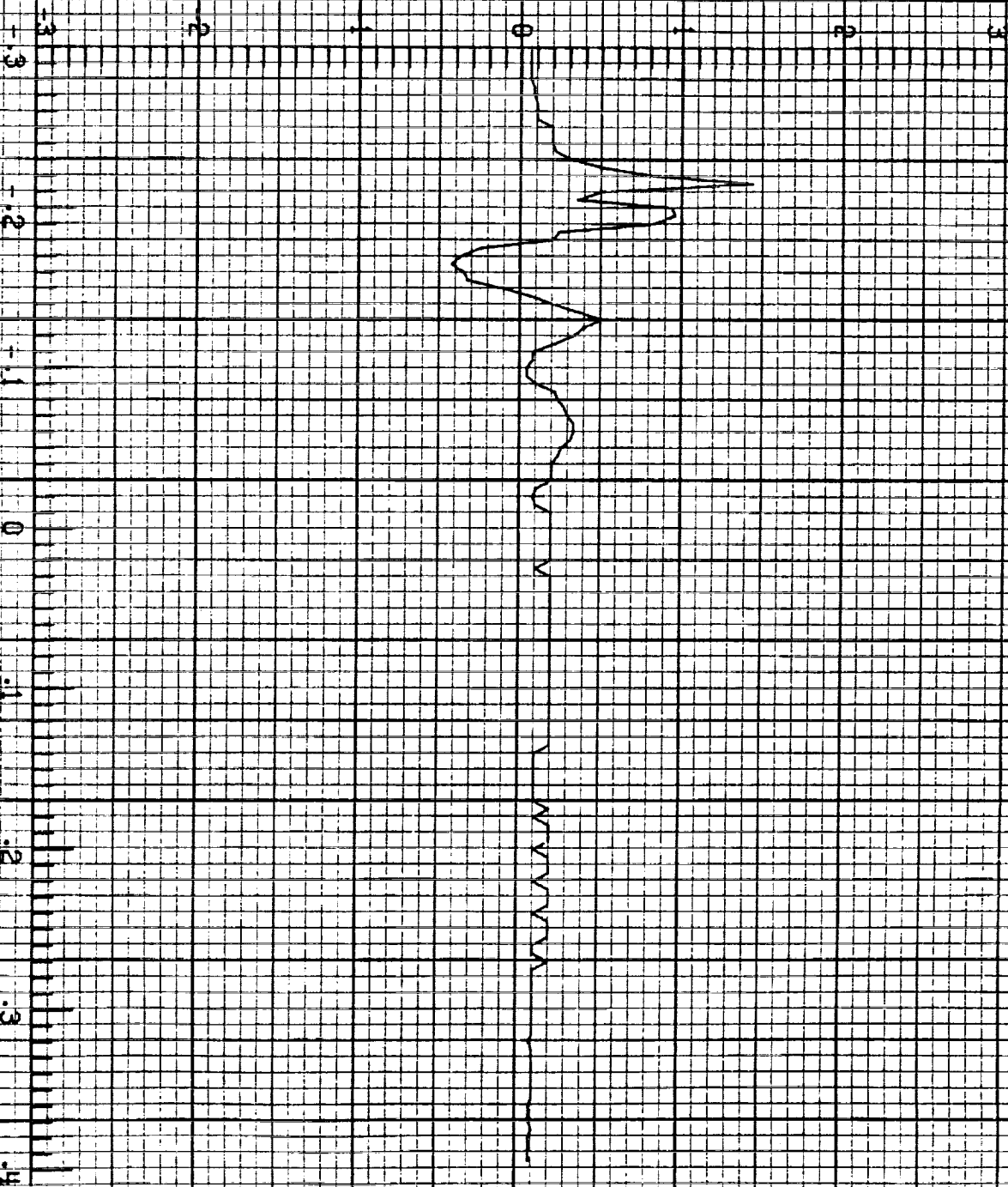
REC 2 RUN NO. 5

6.029

\hat{D}_1 A/m²

19:39:38.6
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-737

LECD RUN NO. 5

6.023

$\frac{1}{T}$ A/S

19:39:38.6
CHANNEL NO. 2.1

MICROSECONDS



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 5

6.029

\dot{D}_{wr} A/m²

19:39:38.6
CHANNEL NO. 3.C

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 5

3.023

D_w

A/m^2

19:39:38.6
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 5

6.028

D_r A/m²

19:39:38.6
CHANNEL NO. 3.2

MICROSECONDS

828

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 5

6.023

TP 100

ORIGINAL PAGE IS
OF POOR QUALITY

V_w V

19:39:38.6
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

FC # RUN NO. 5

6.028

TP 101

V_{fb} V

60

40

20

0

20

40

60

-.3

-.2

-.1

0

.1

.2

.3

.4

.5

.6

19:39:38.6
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 5

5.028

TP123

A

ORIGINAL PAGE IS
OF POOR QUALITY

19:39:38.6
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 6

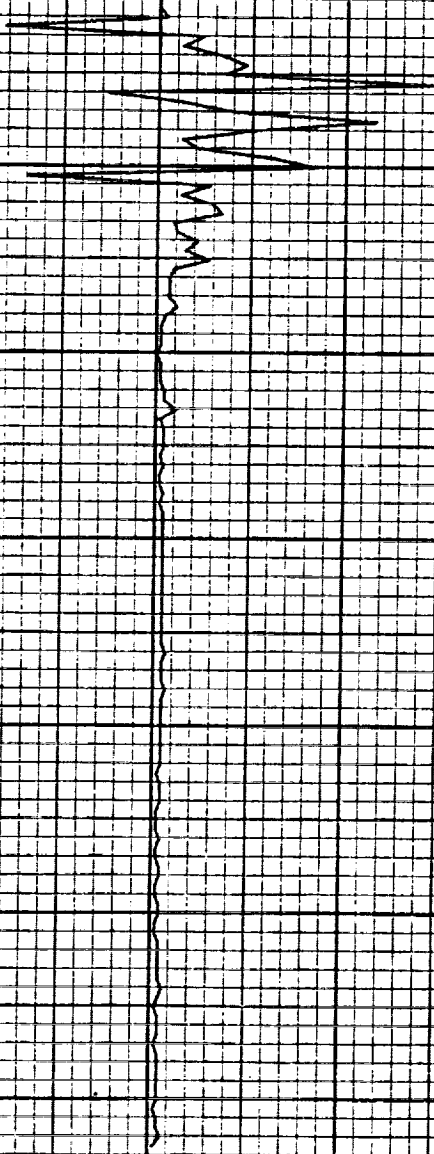
5.034

I_n A

19:40:17.4
CHANNEL NO. 1.1

MICROSECONDS

10 x 10³



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 6

3.034

I, A

19:40:17.4
CHANNEL NO. 1.2

MICROSECONDS

18 x 10³

F-106 LIGHTNING/ 84-037

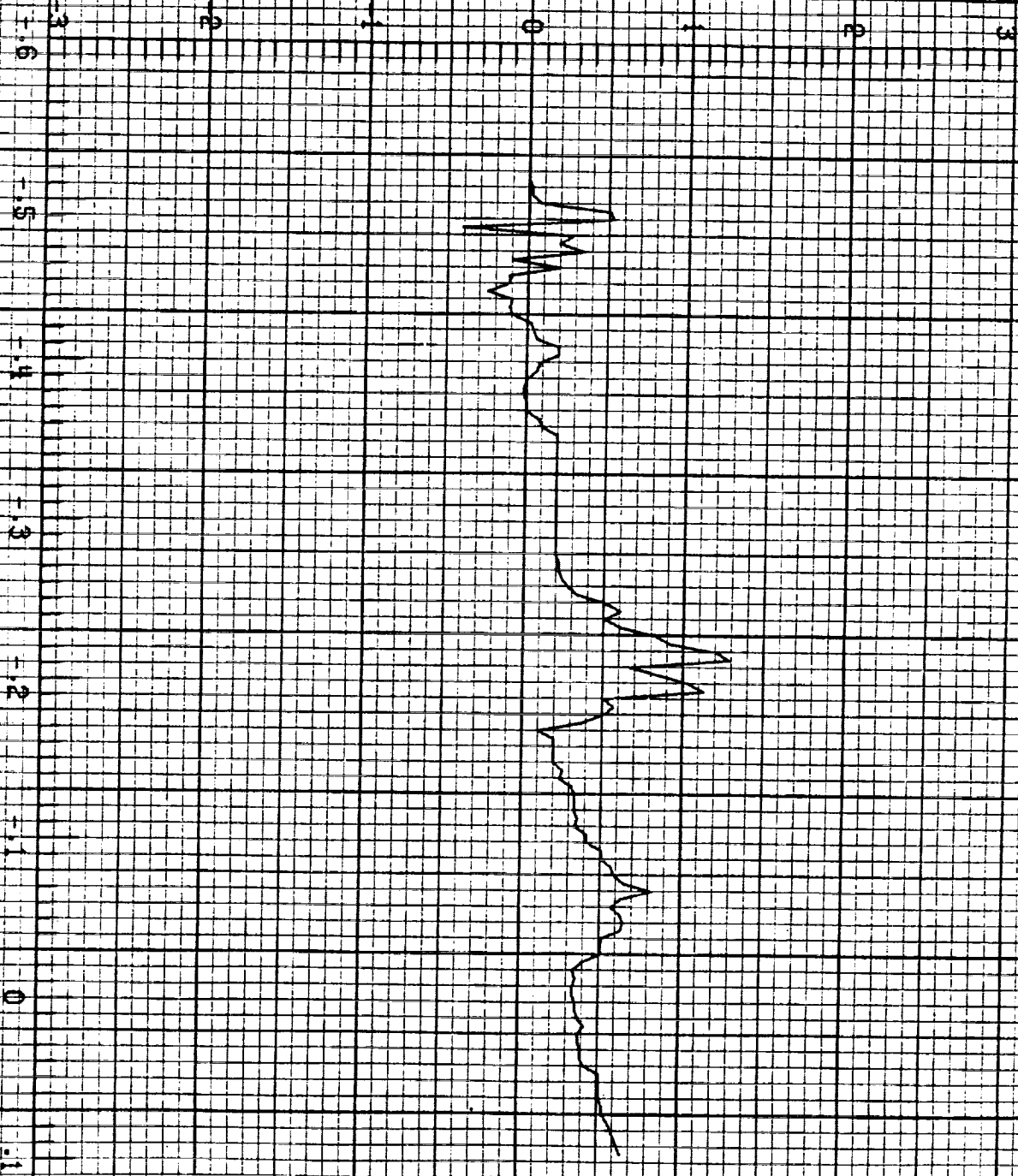
FC2 RUN NO. 6

6.034

D_1 A/m²

19:40:17.4
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-108 LIGHTNING/ 84-037

1 FC 2 RUN NO. 6

3.03#

$\frac{1}{s}$ A/s

19:40:17.4
CHANNEL NO. 2.1

MICROSECONDS

24 x 10¹⁰

F-106 LIGHTNING/ 84-037

1 FC 3 RUN NO. 6

5.034

\bar{D}_{vr} A/m²

19:40:17.4
CHANNEL NO. 3.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

EC3 RUN NO. 6

6.034

\bar{D}_{v1} A/m²

19:40:17.4
CHANNEL NO. 3.1

MICROSECONDS

837

E-106 LIGHTNING/ 84-037

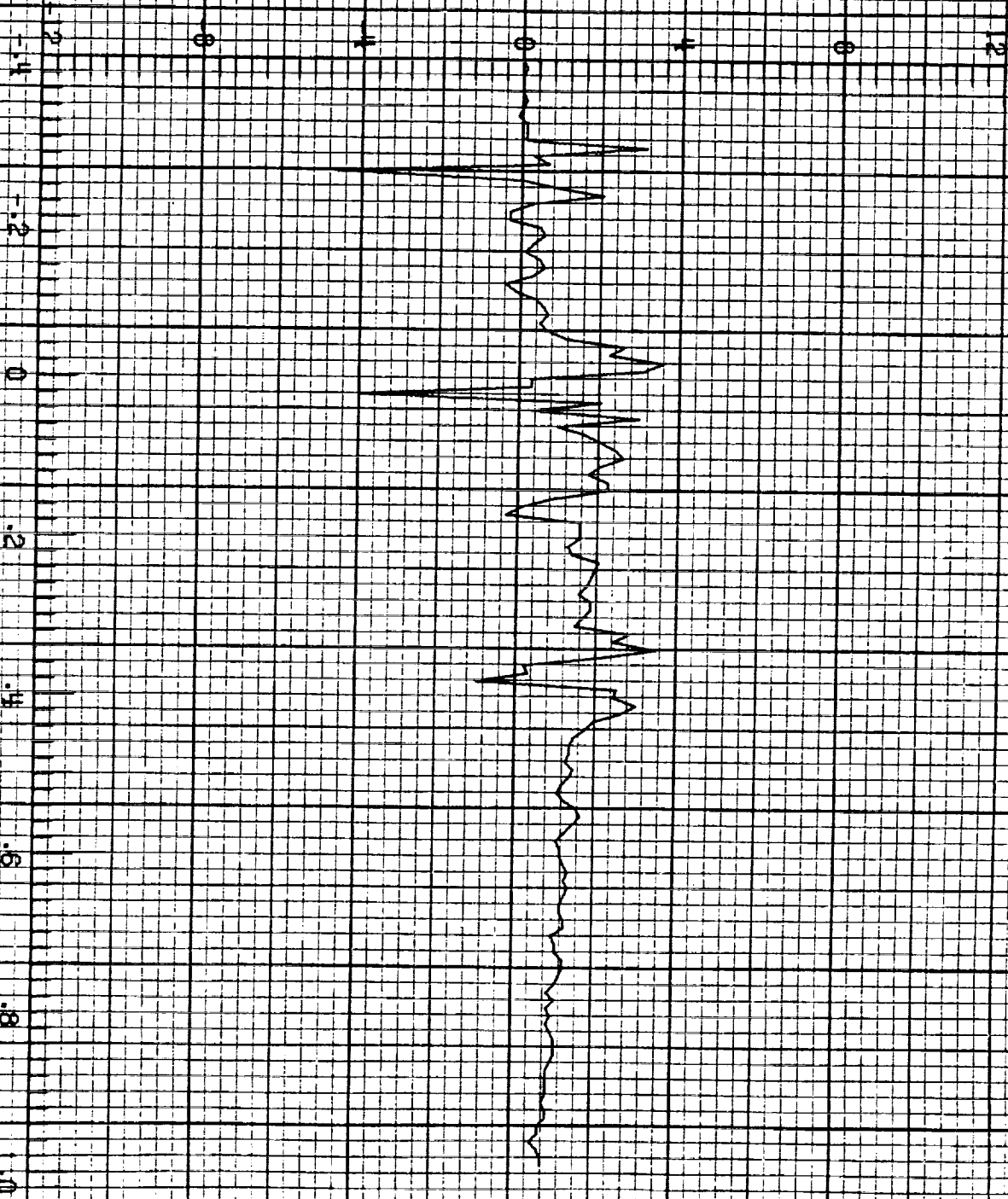
LEO3 RUN NO. 6

6.034

D_r A/m^2

19:40:17.4
CHANNEL NO. 8.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-037

IFC 4 RUN NO. 6

8.03H

TP 100

V_w V

119:40:17.4
CHANNEL NO. 41.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEO4 RUN NO. 6

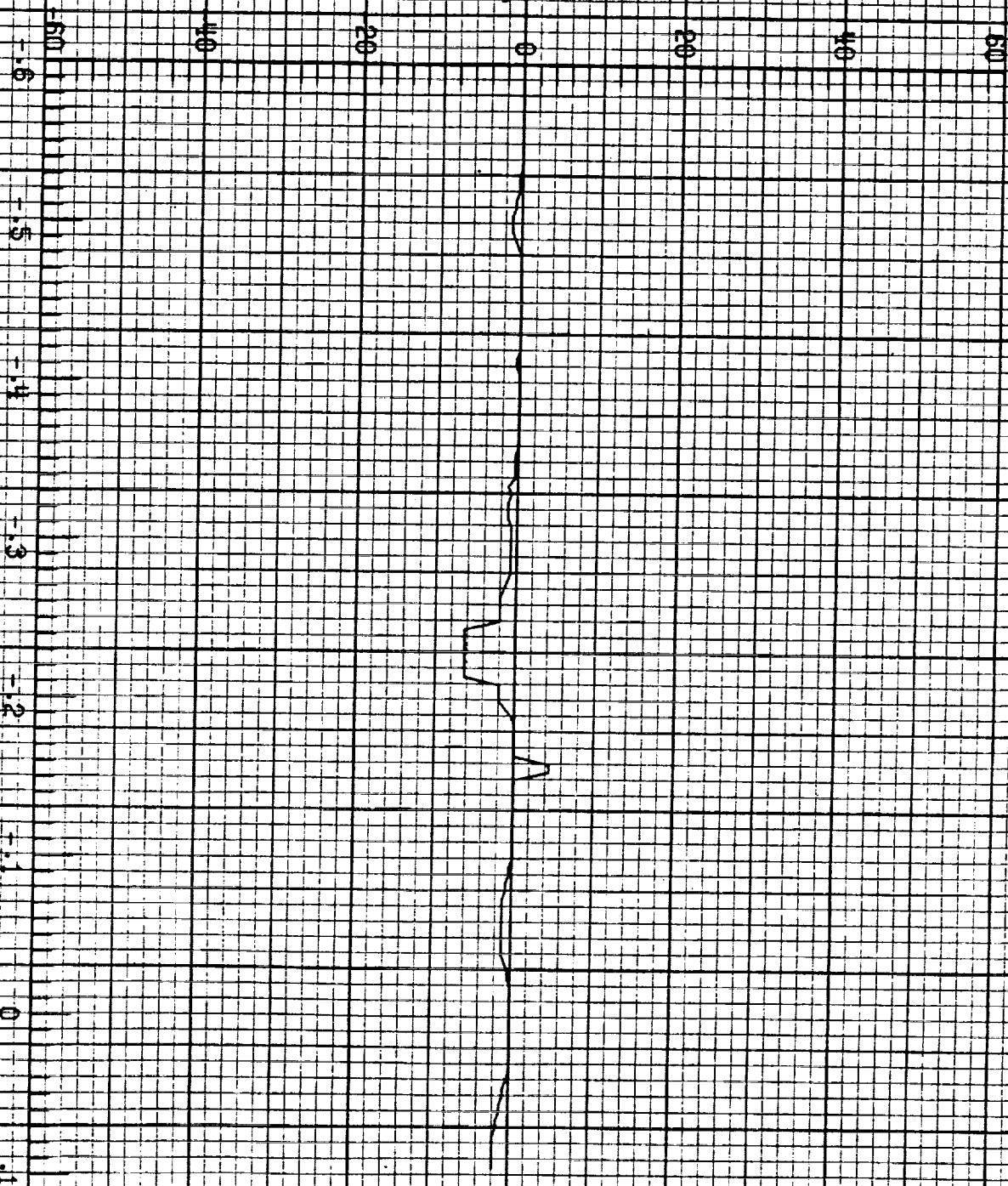
6.034

TP 101

V_{to} V

19:40:17.4
CHANNEL NO. 4.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC # RUN NO. 6

S.03#

TP123 A

19:40:17.4
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

IFC.1 RUN NO. 7

6.037

I_n A

10 x 10³

-1.6

-.8

0

.8

1.6

2.4

3.2

4.0

MICROSECONDS

19:40:39.0

CHANNEL NO. 1.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC1 RUN NO. 7

6.037

I_t A

19:40:39.0
CHANNEL NO. 1.2

MICROSECONDS

F=106 LIGHTNING/ 84-037

1 FC2 RUN NO. 7

5.037

D_t A/m²

19:40:39.0
CHANNEL NO. 2.0

MICROSECONDS

ORIGINAL PAGE 13
OF POOR QUALITY

E-108 LIGHTNING/ 84-037

1 FC2 RUN NO. 7

6.037

$\frac{1}{t}$ A/s

19:40:39.0
CHANNEL NO. 2.1

MICROSECONDS

24 x 10⁴

F=106 LIGHTNING/ 84-037

LEO3 RUN NO. 7

6.037

\hat{D}_{wr} A/m²

19:40:39.0
CHANNEL NO. 3.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

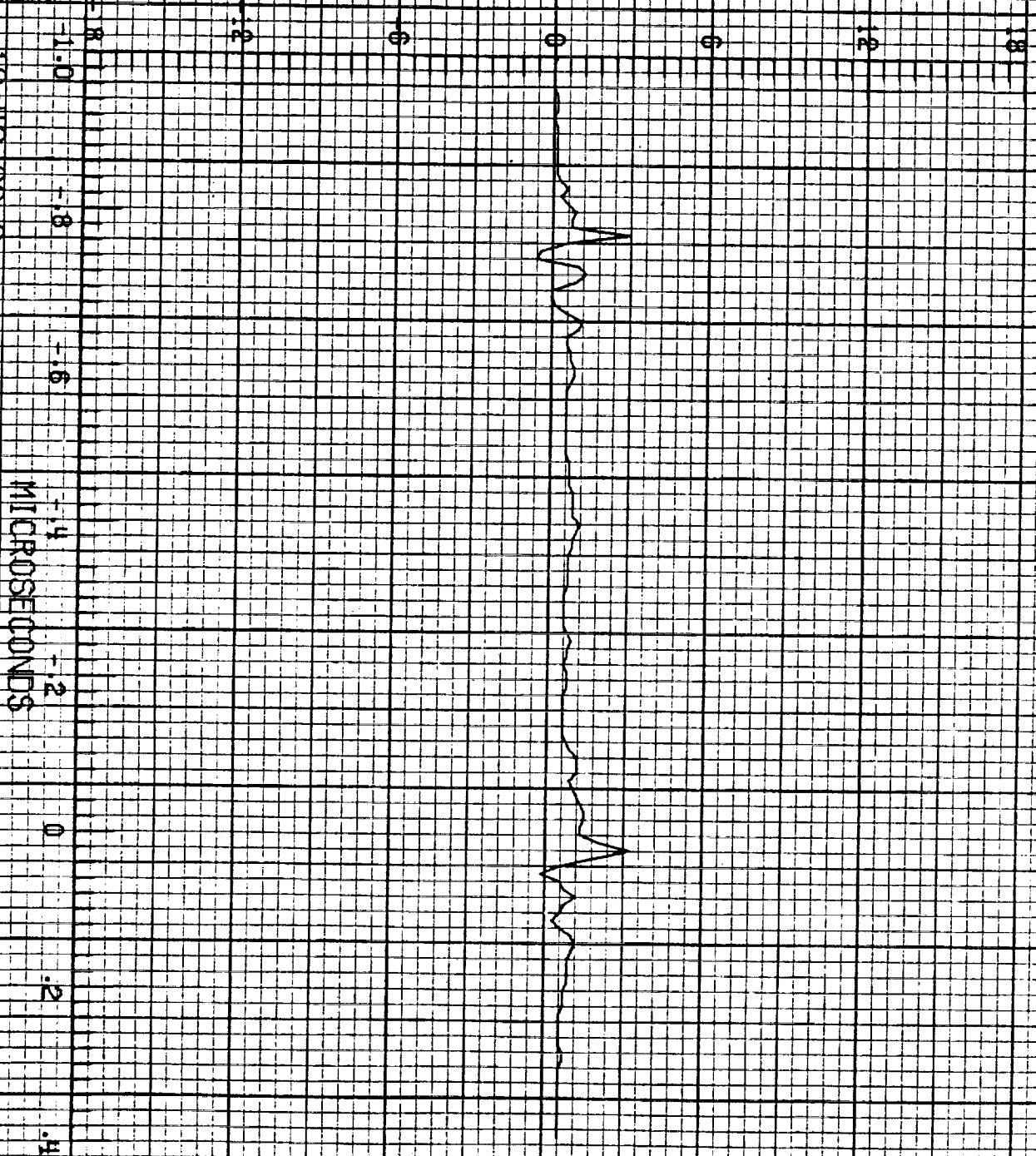
F-106 LIGHTNING/ 84-037

LECS RUN NO. 7

5.037

\hat{D}_{w1} A/m²

19:40:39.0
CHANNEL NO. 3.1



F=106 LIGHTNING/ 84-037

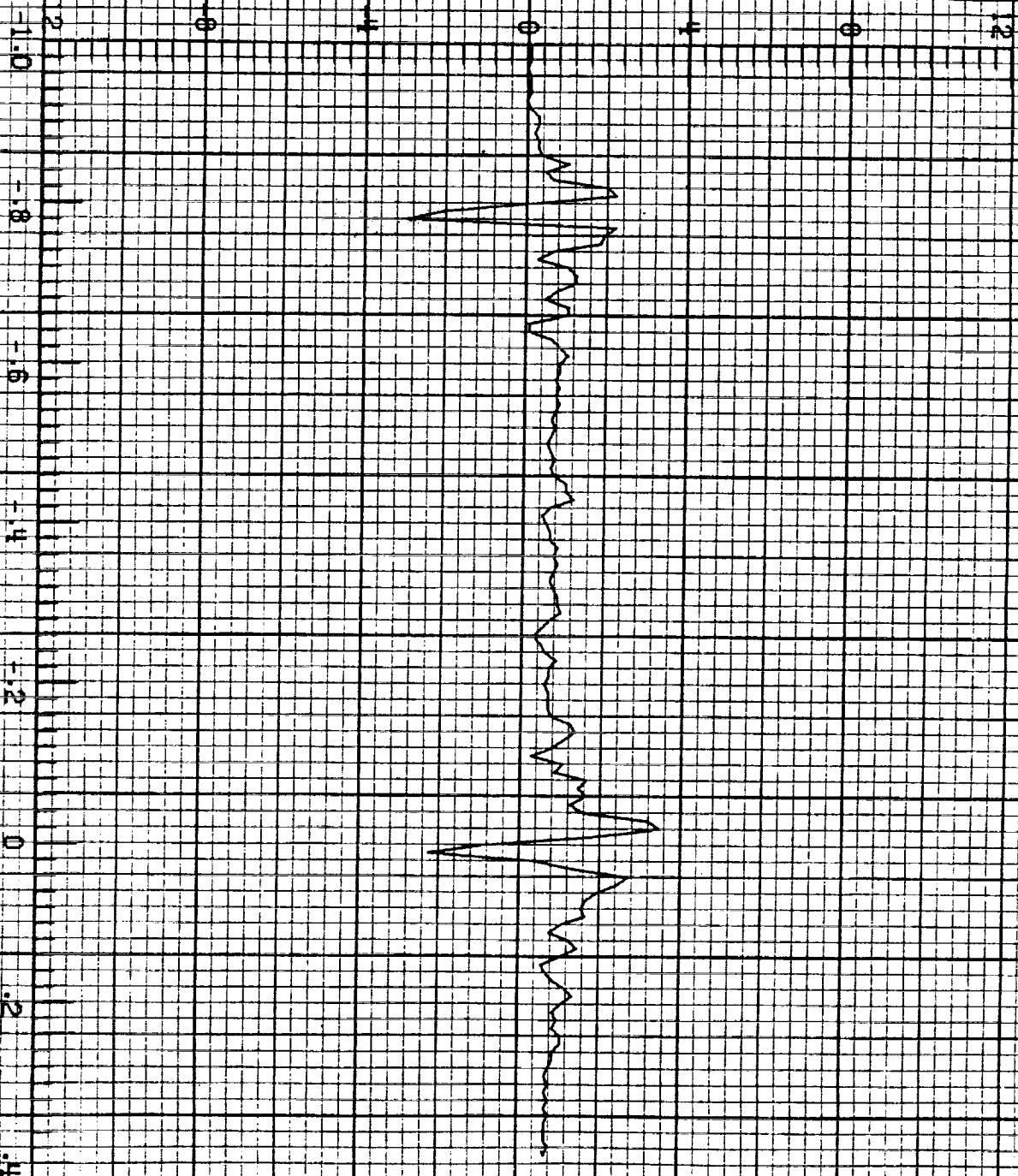
LEO 3 RUN NO. 7

6.037

D_f A/m²

19:40:39.0
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-037

1 FC 4 RUN NO. 7

6.037

TP 100

V_w V

19:40:39.0
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LFC 4 RUN NO. 7

8.037

TP 101

V_{fb} V

19:40:39.0
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC# RUN NO. 7

6.037

TP123

A

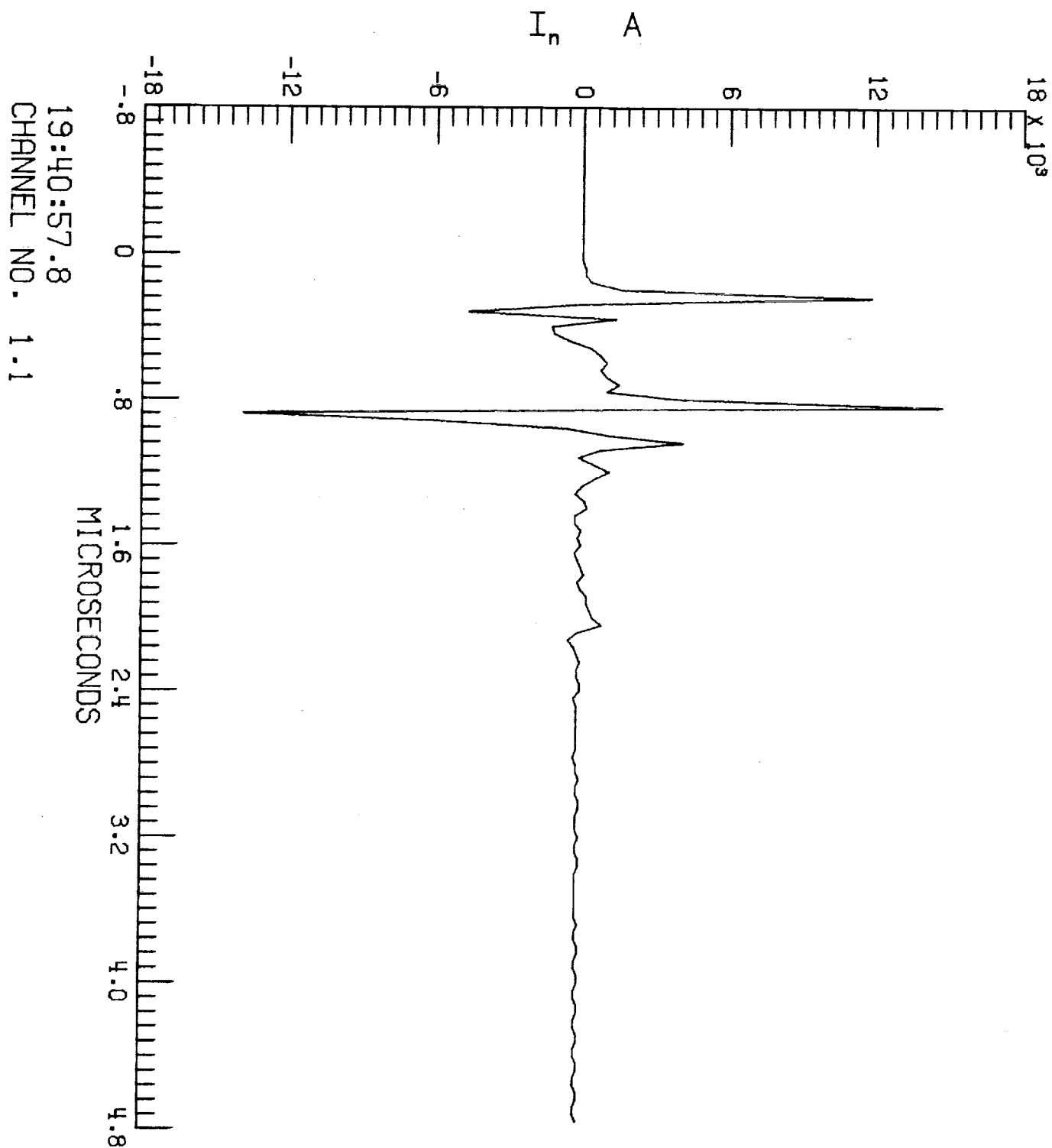
19:40:39.0
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 8

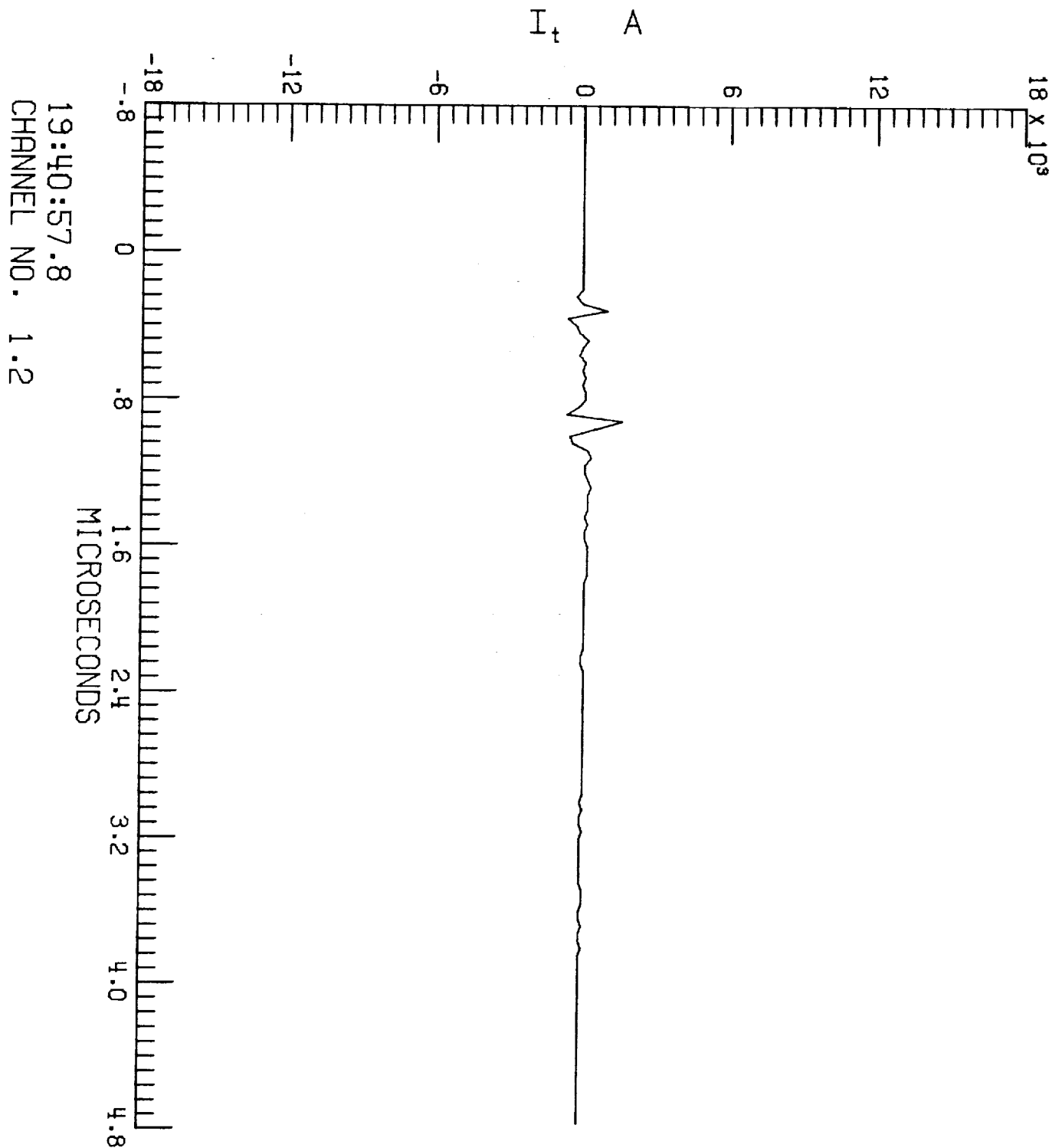
S.041



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 8

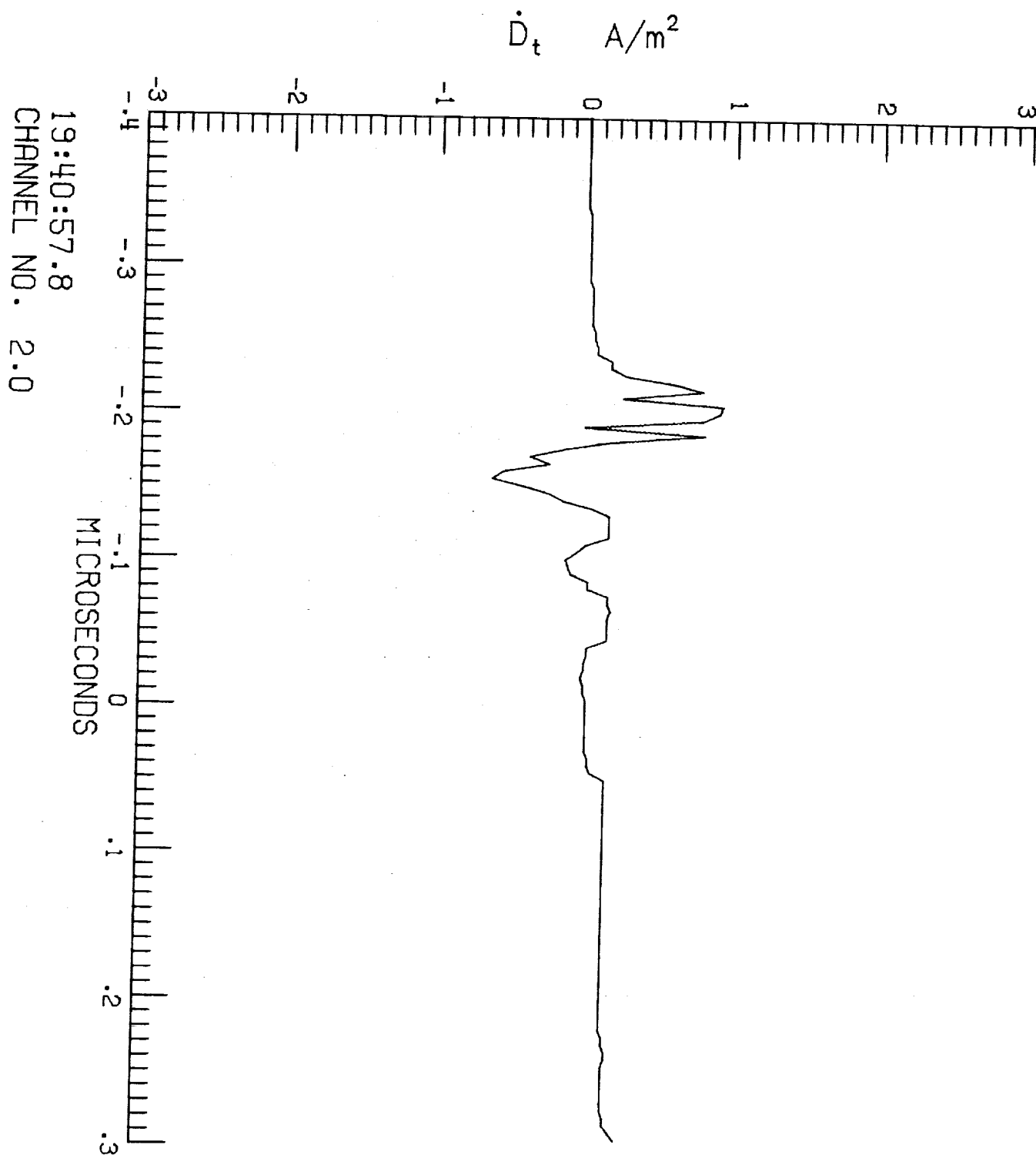
S.041



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 8

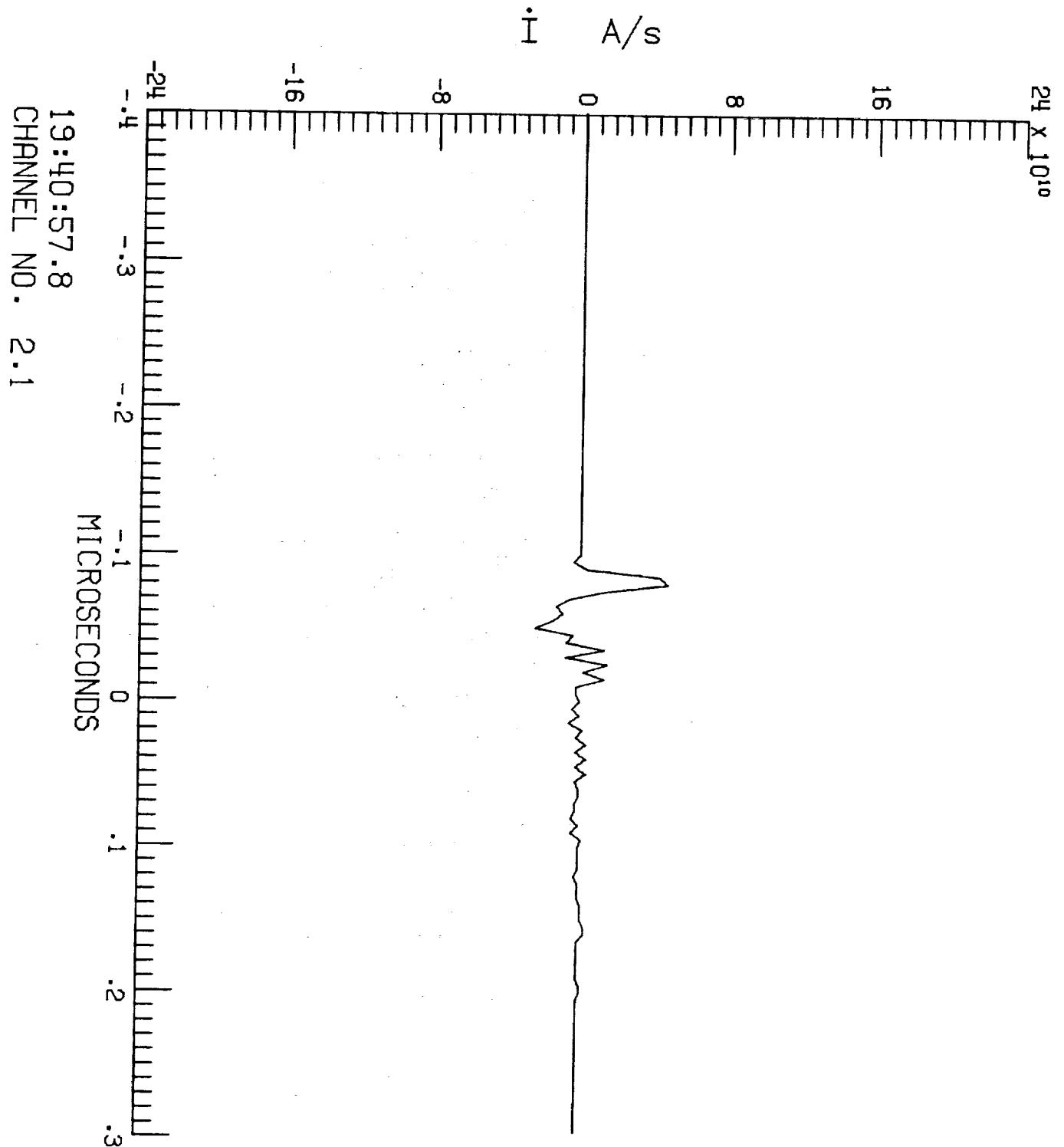
S.041



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 8

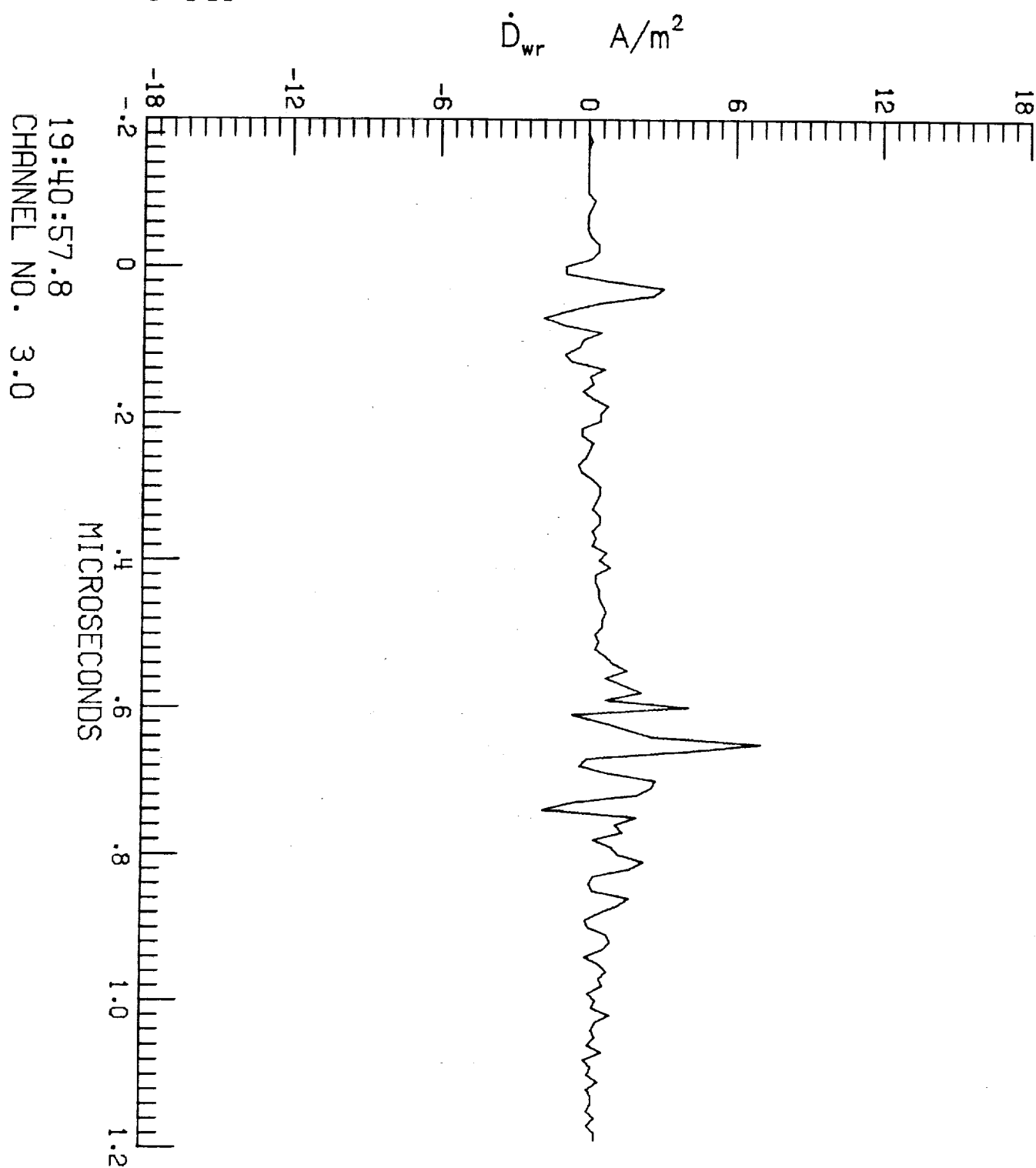
S.041



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 8

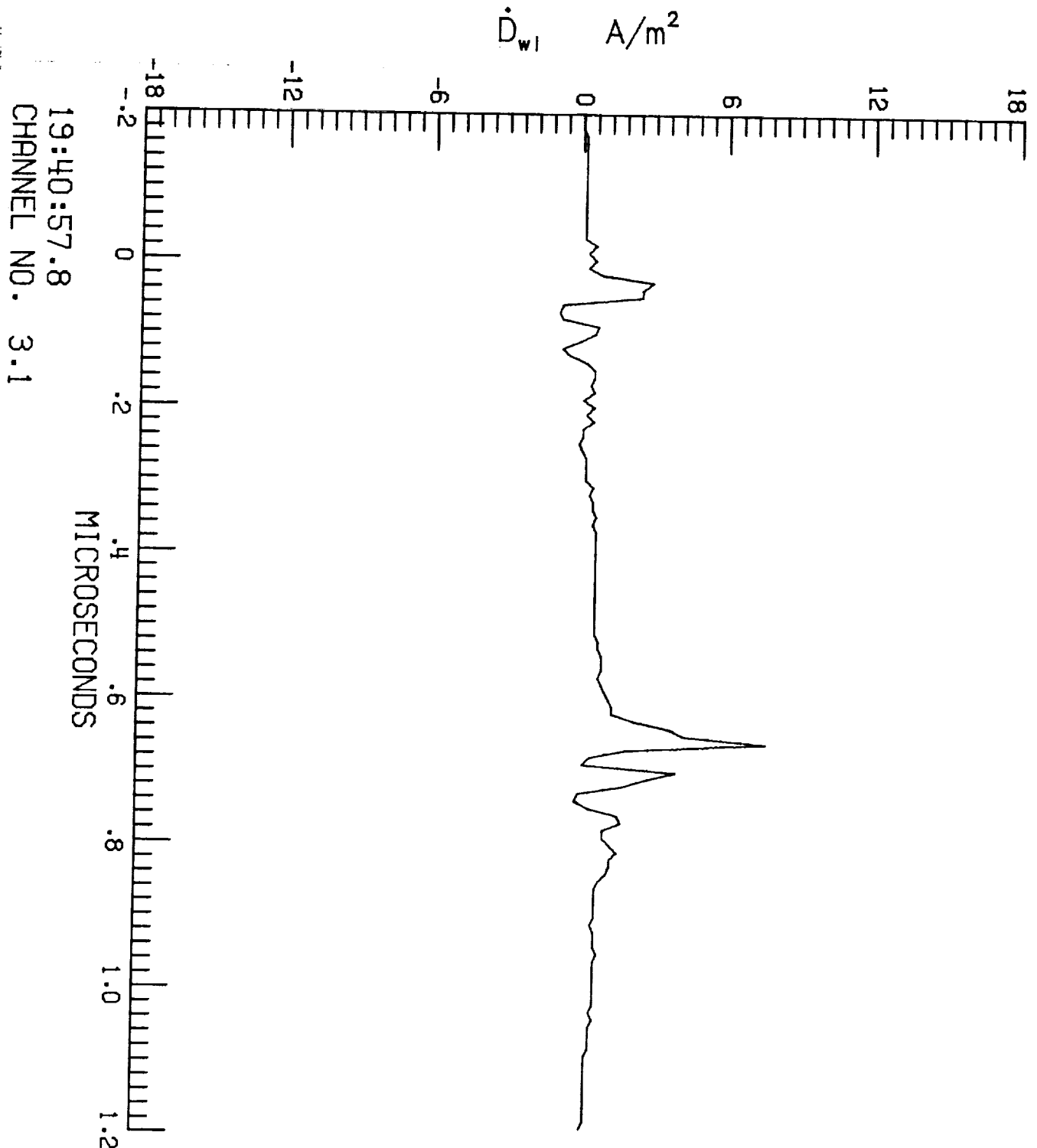
S.041



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 8

S.041

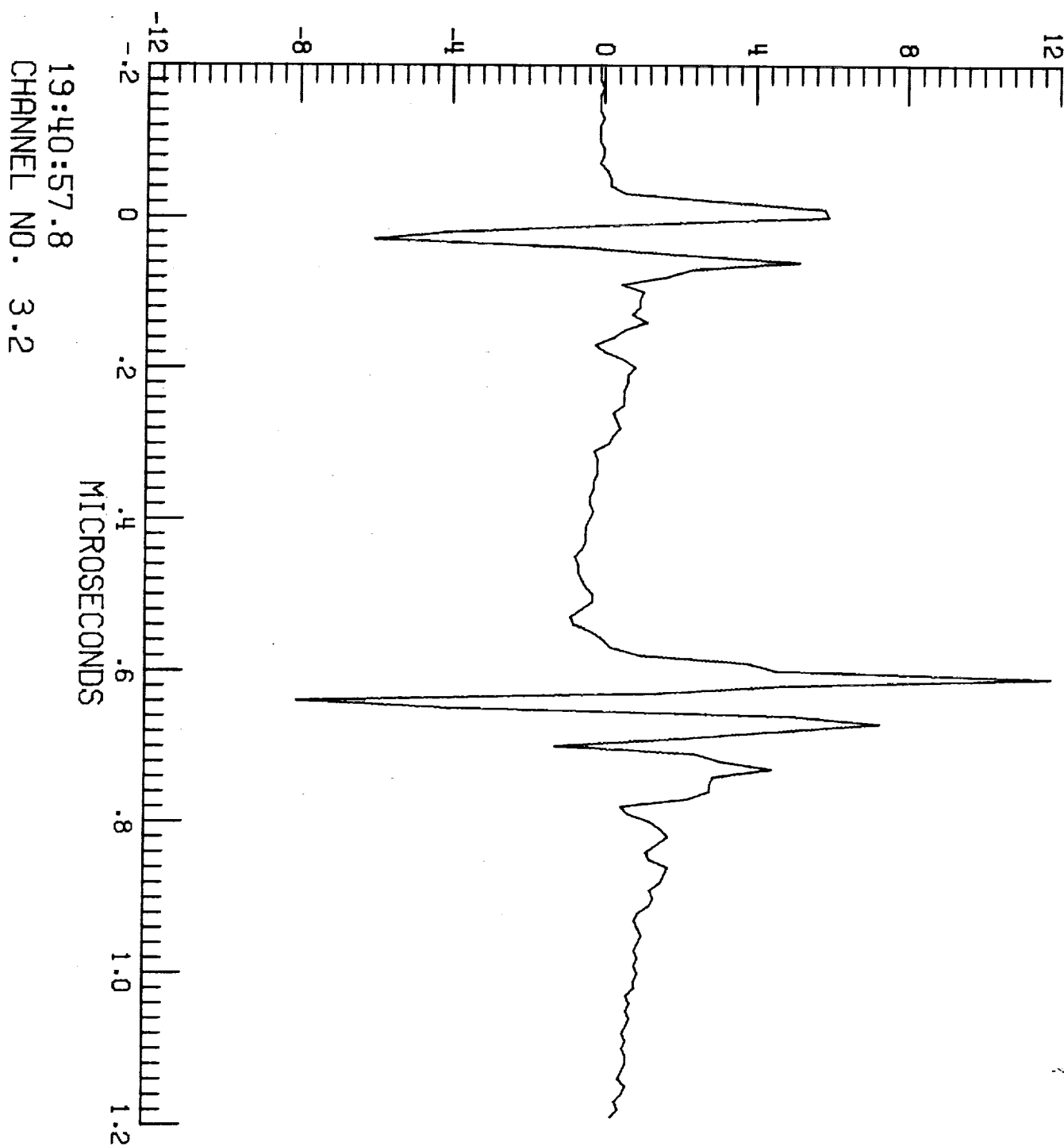


F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 8

S.041

\dot{D}_f A/m²



ORIGINAL PAGE IS
OF POOR QUALITY

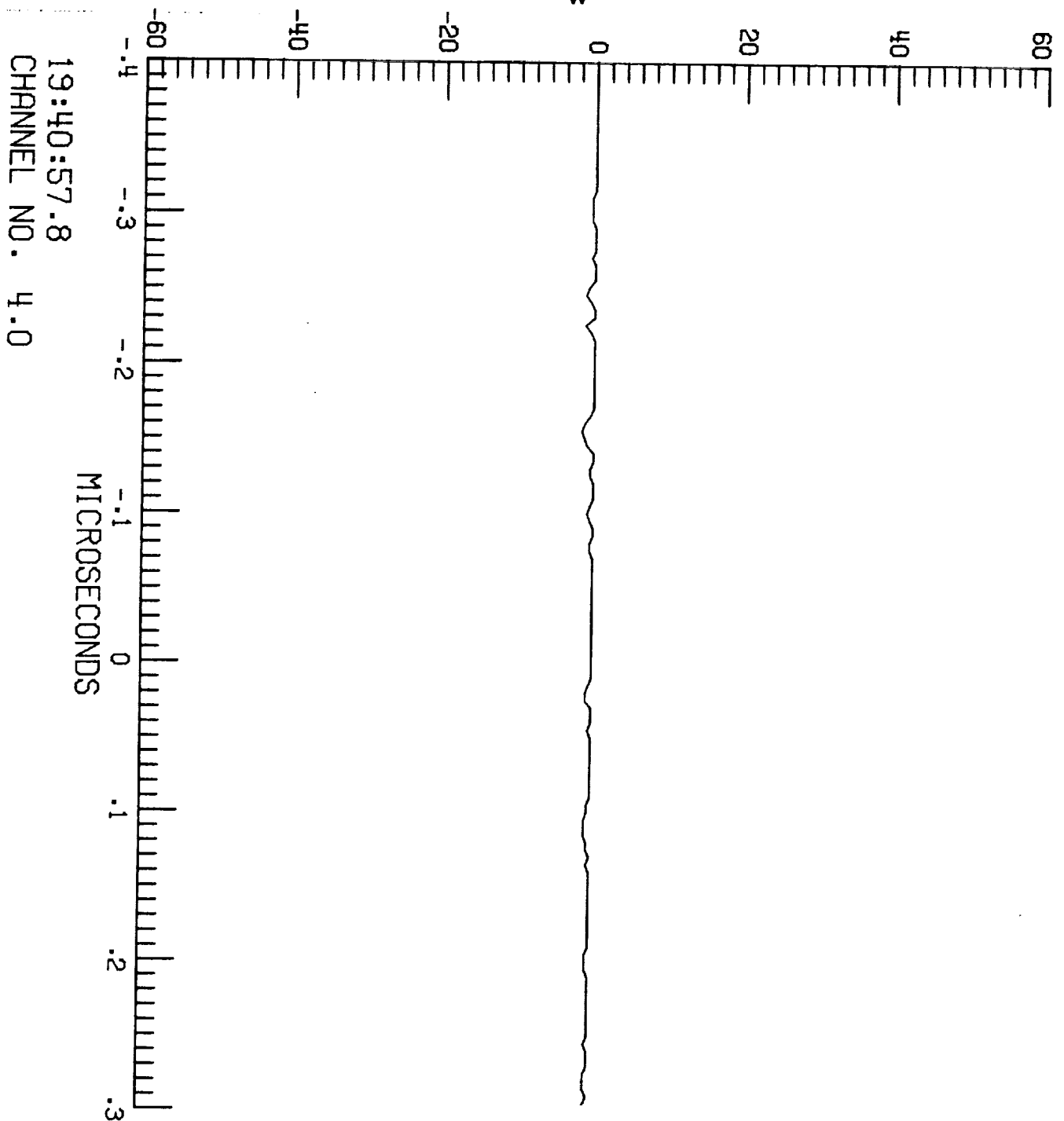
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 8

S.041

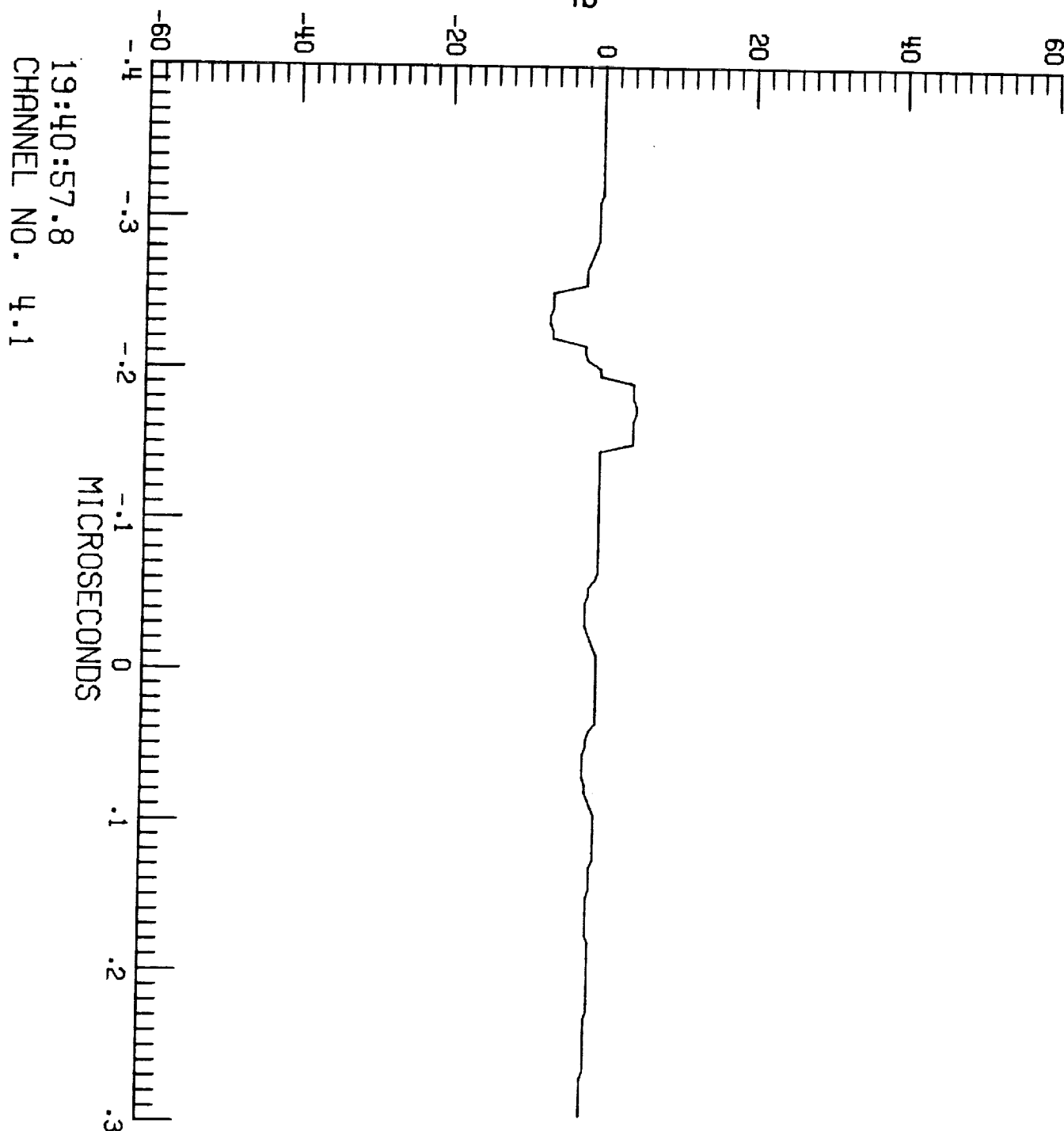
TP 100

V_w V



LEC 4 RUN NO. 8

TP 101

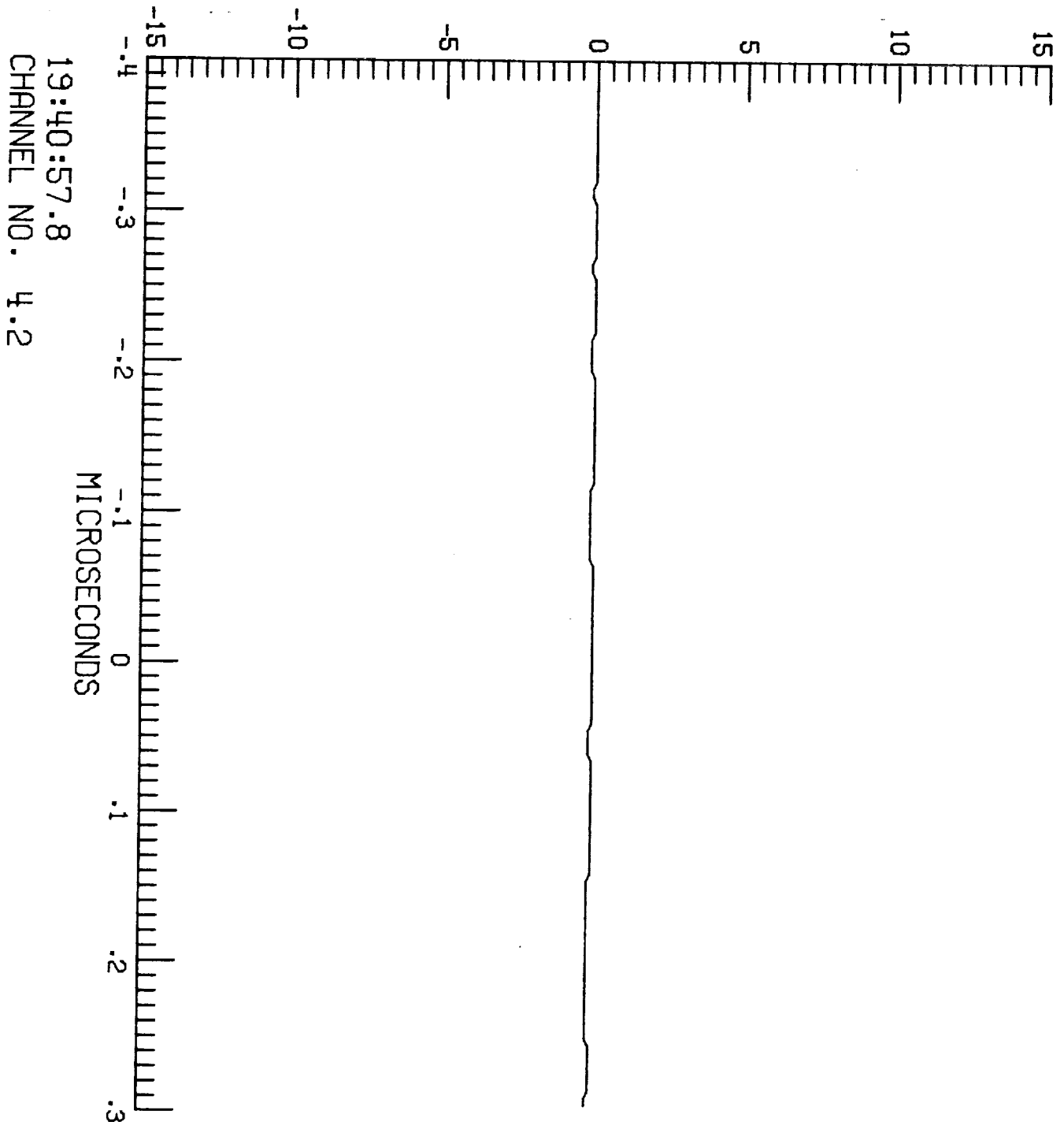
$$V_{fb} \quad V$$


ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037 LEC 4 RUN NO. 8

S.041

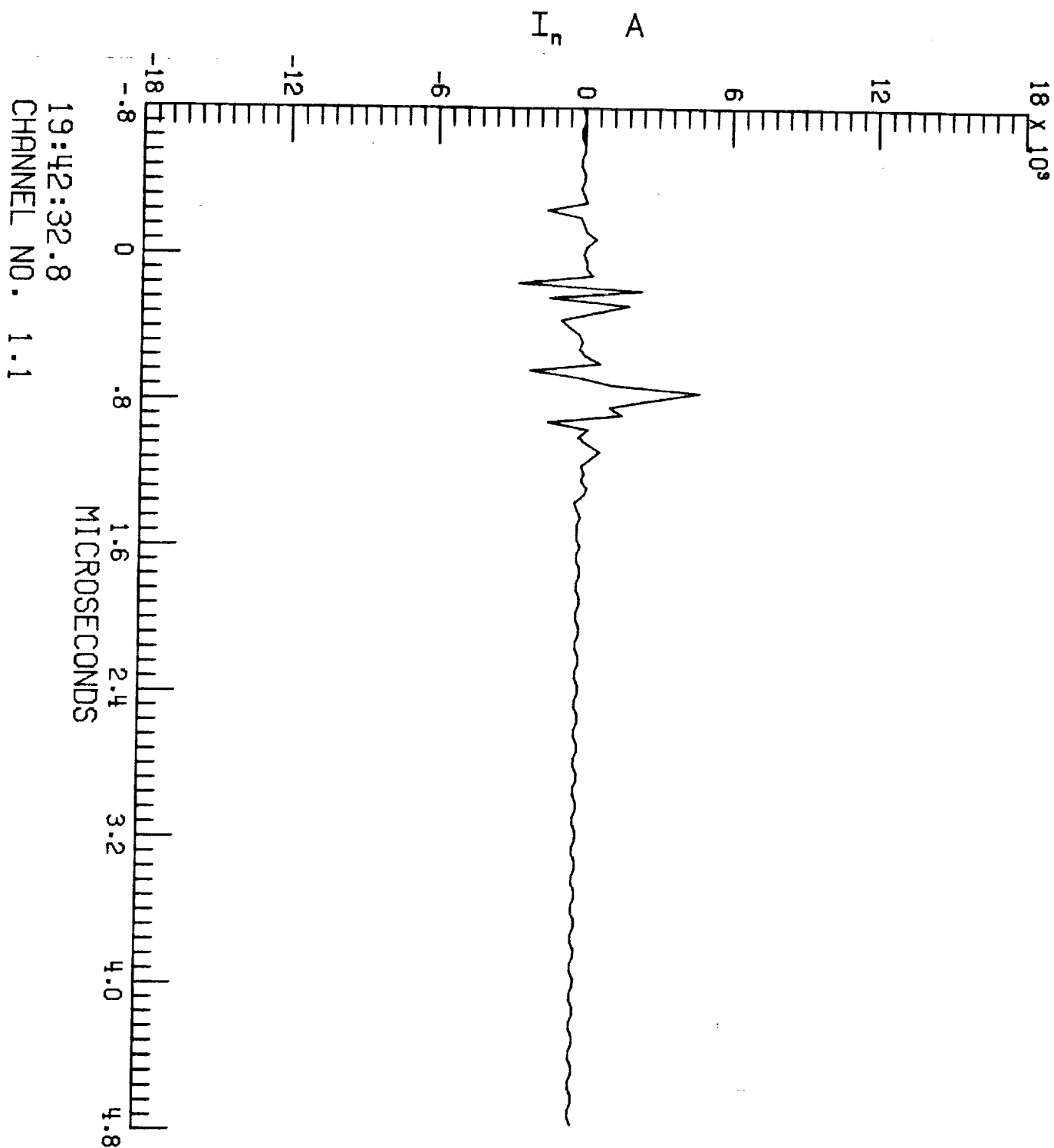
TP123 A



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 9

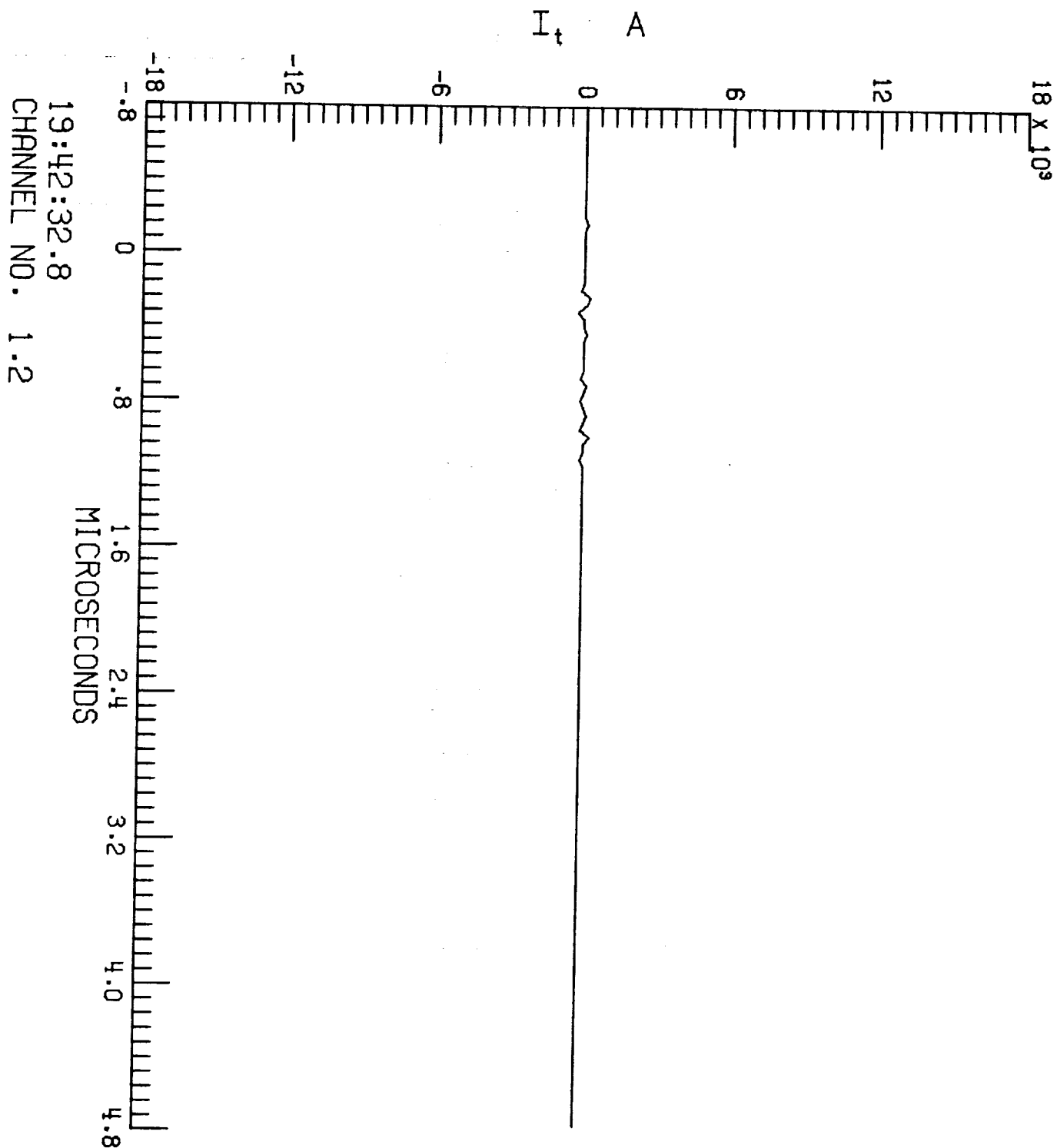
S.044



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 9

S.044

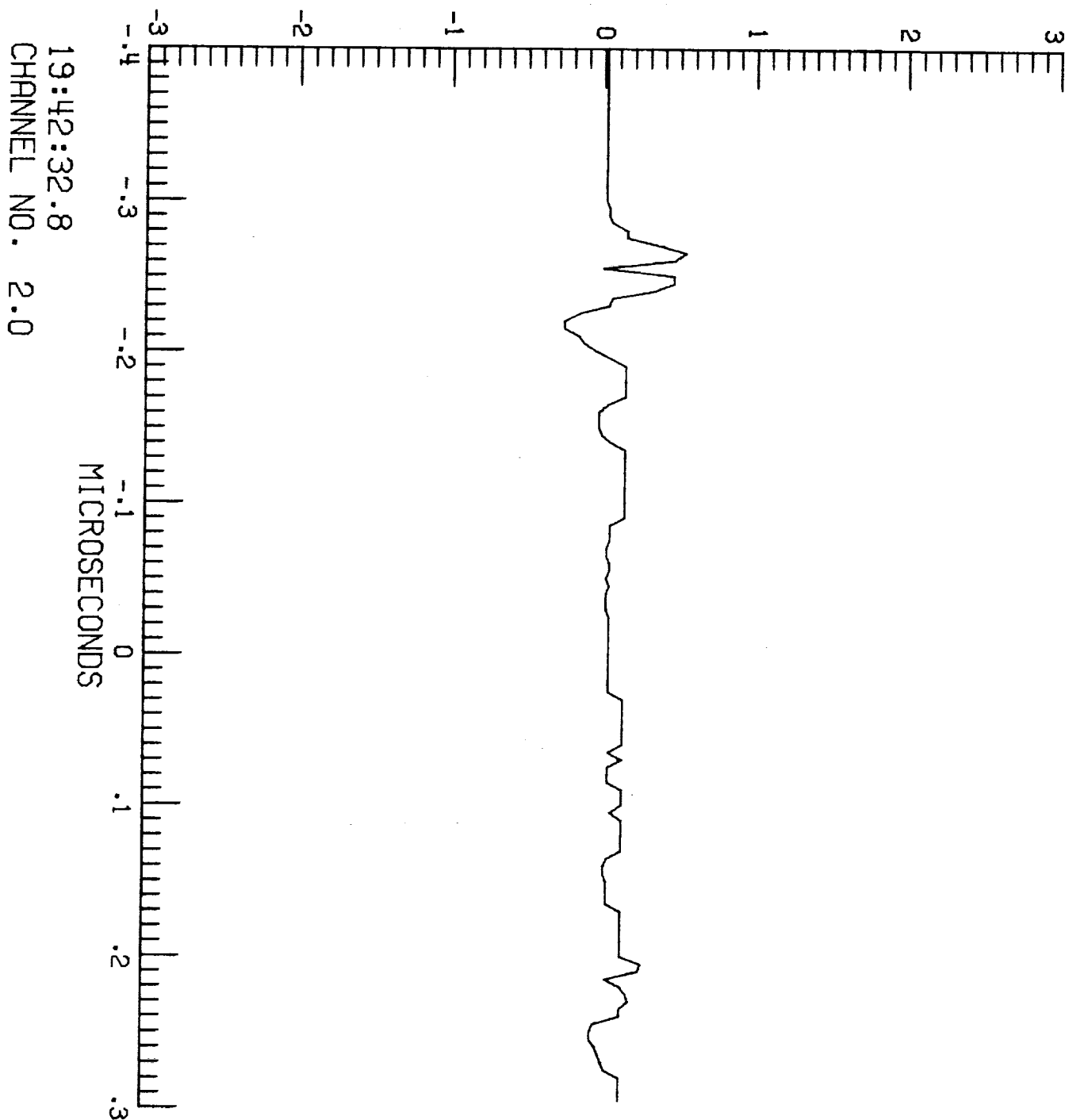


F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 9

S.044

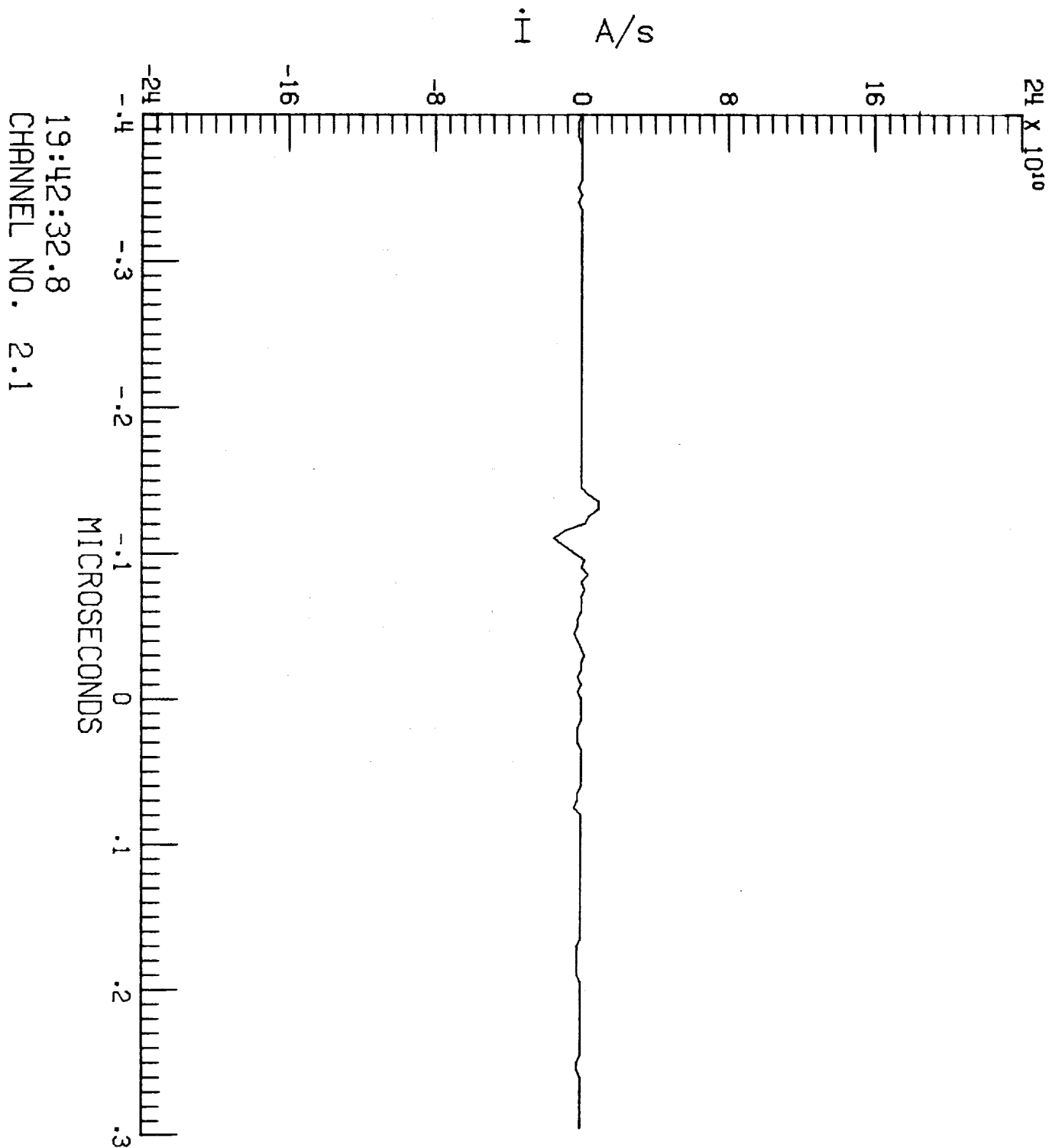
\dot{D}_t A/m²



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 9

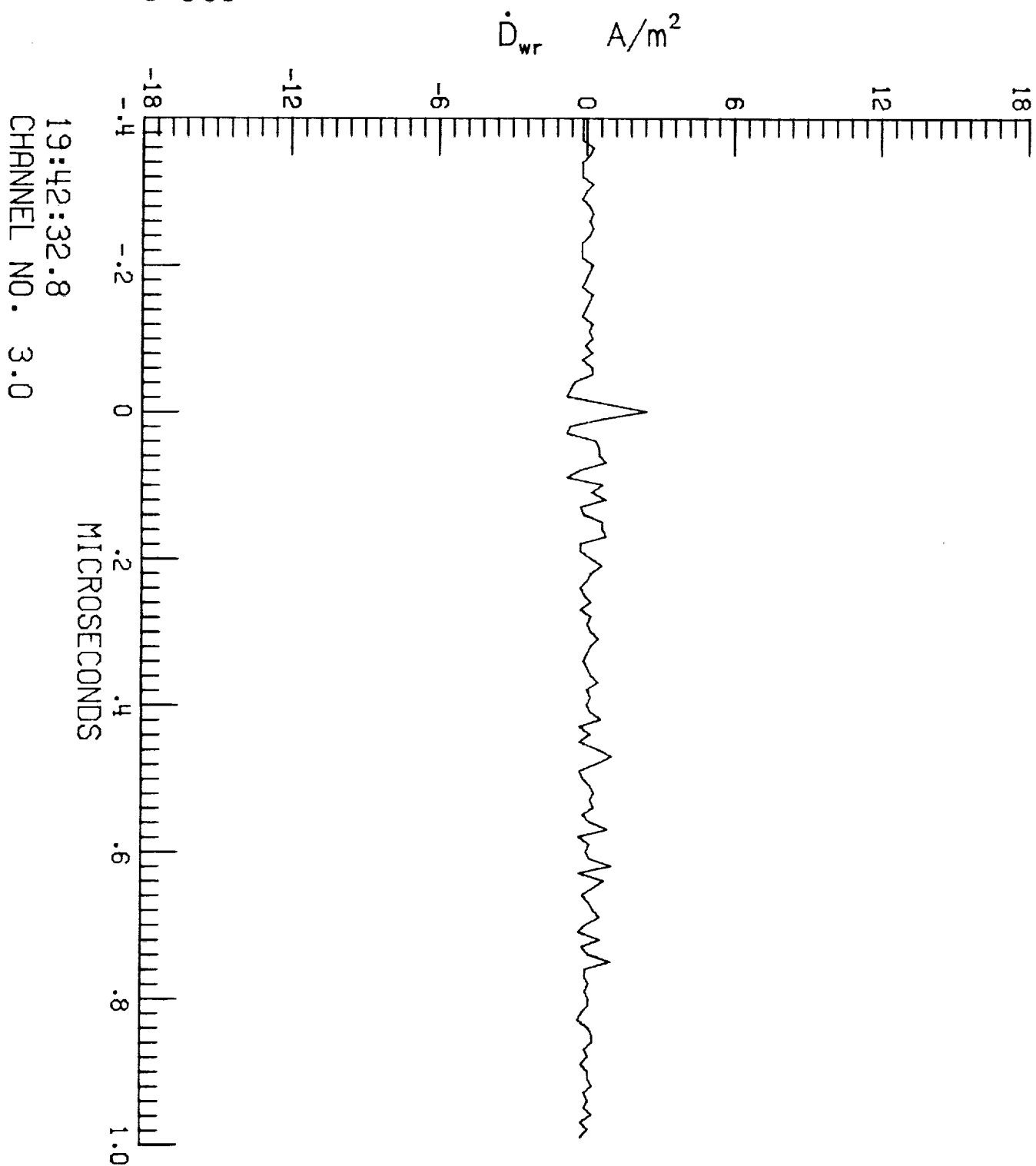
S.044



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 9

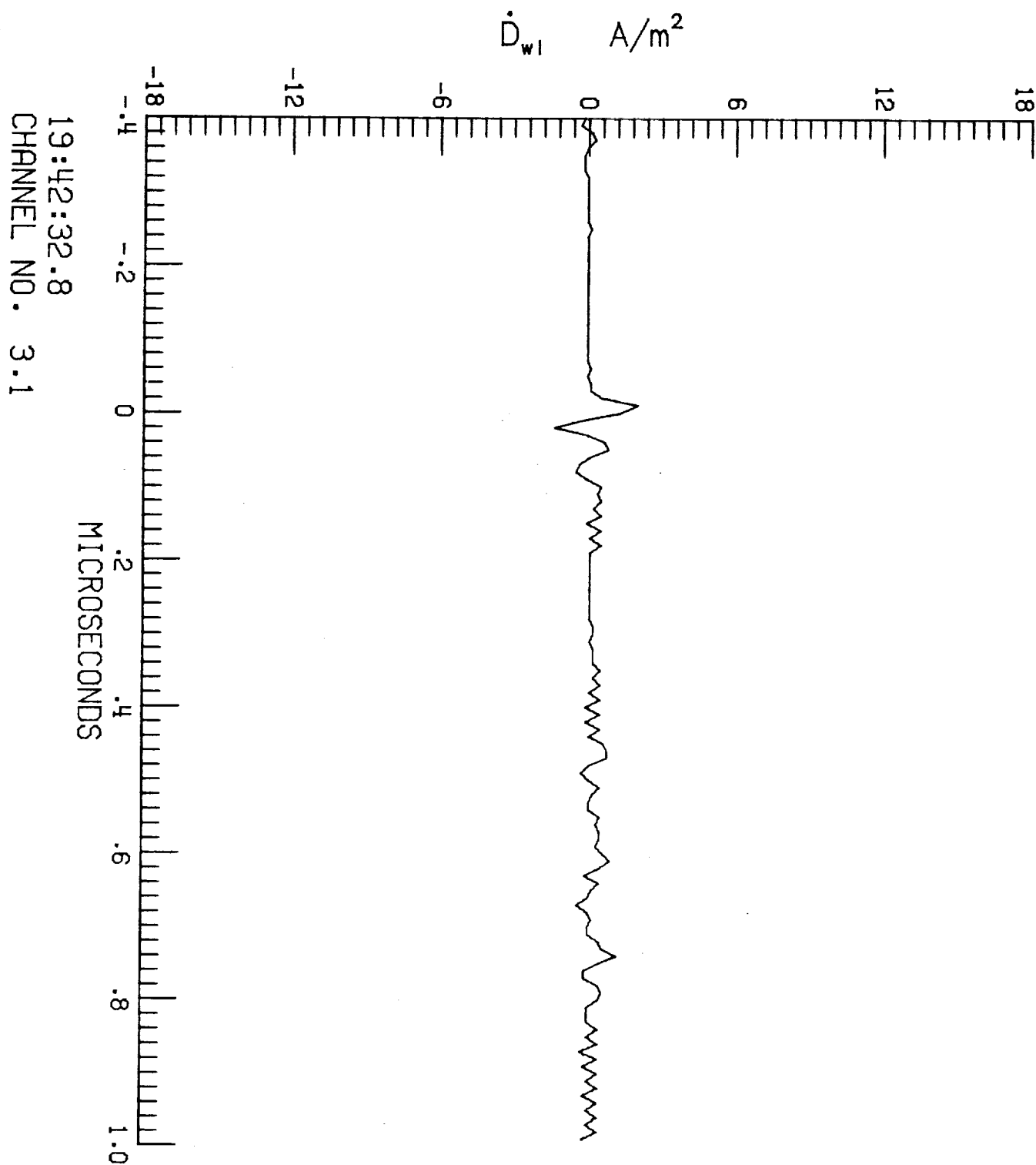
S.044



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 9

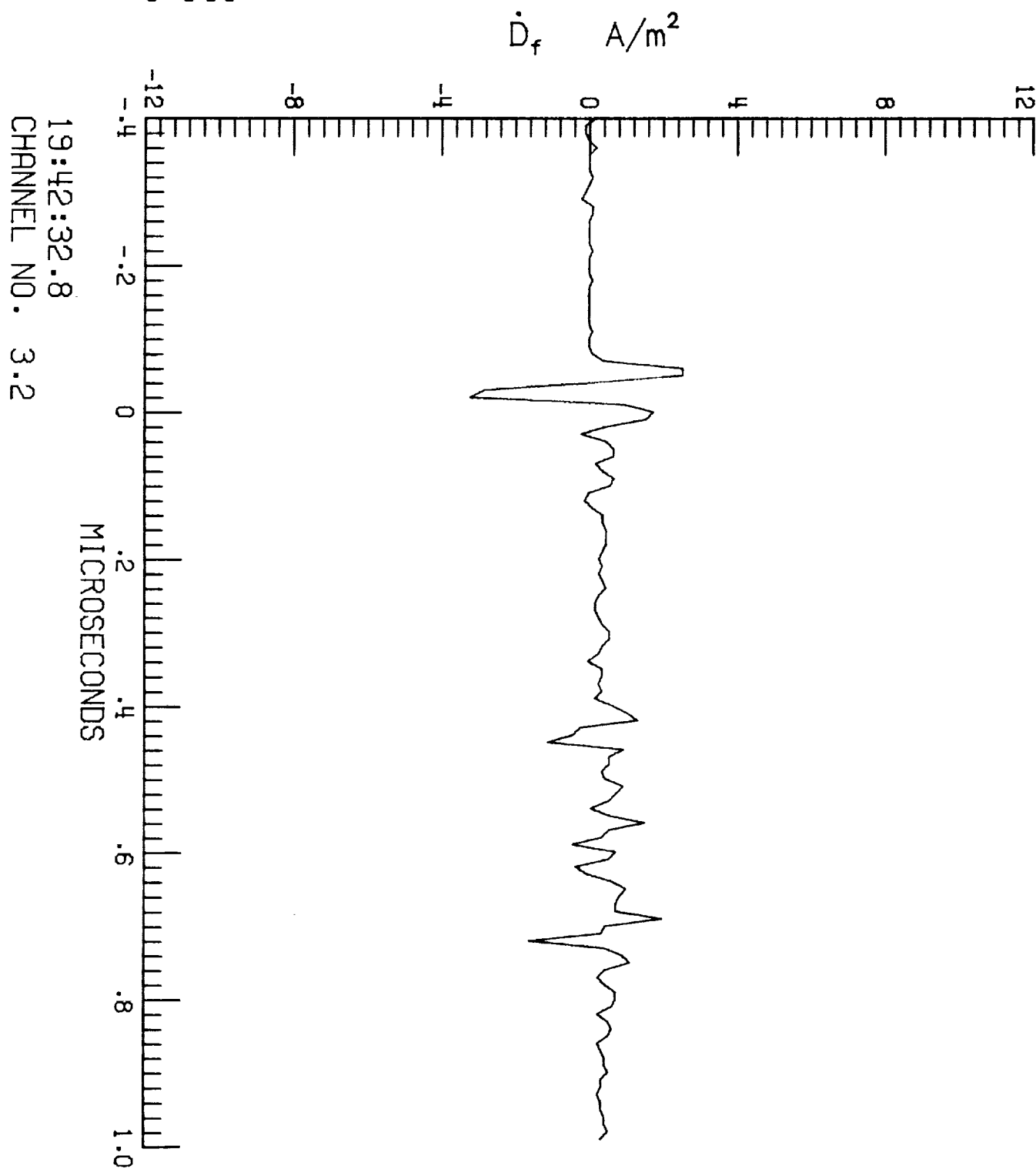
S.044



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 9

S.044



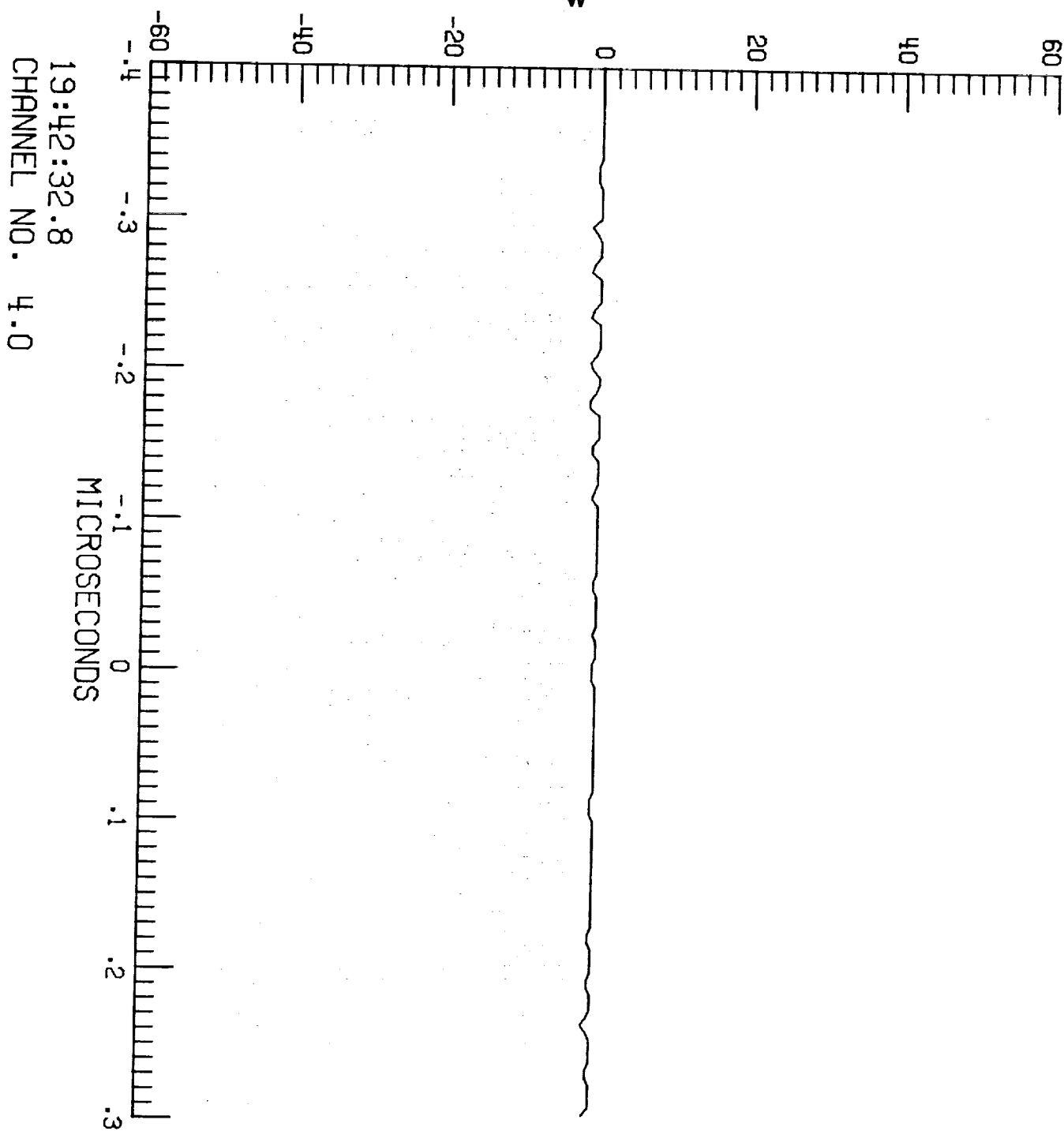
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 9

S.044

TP 100

V_w V



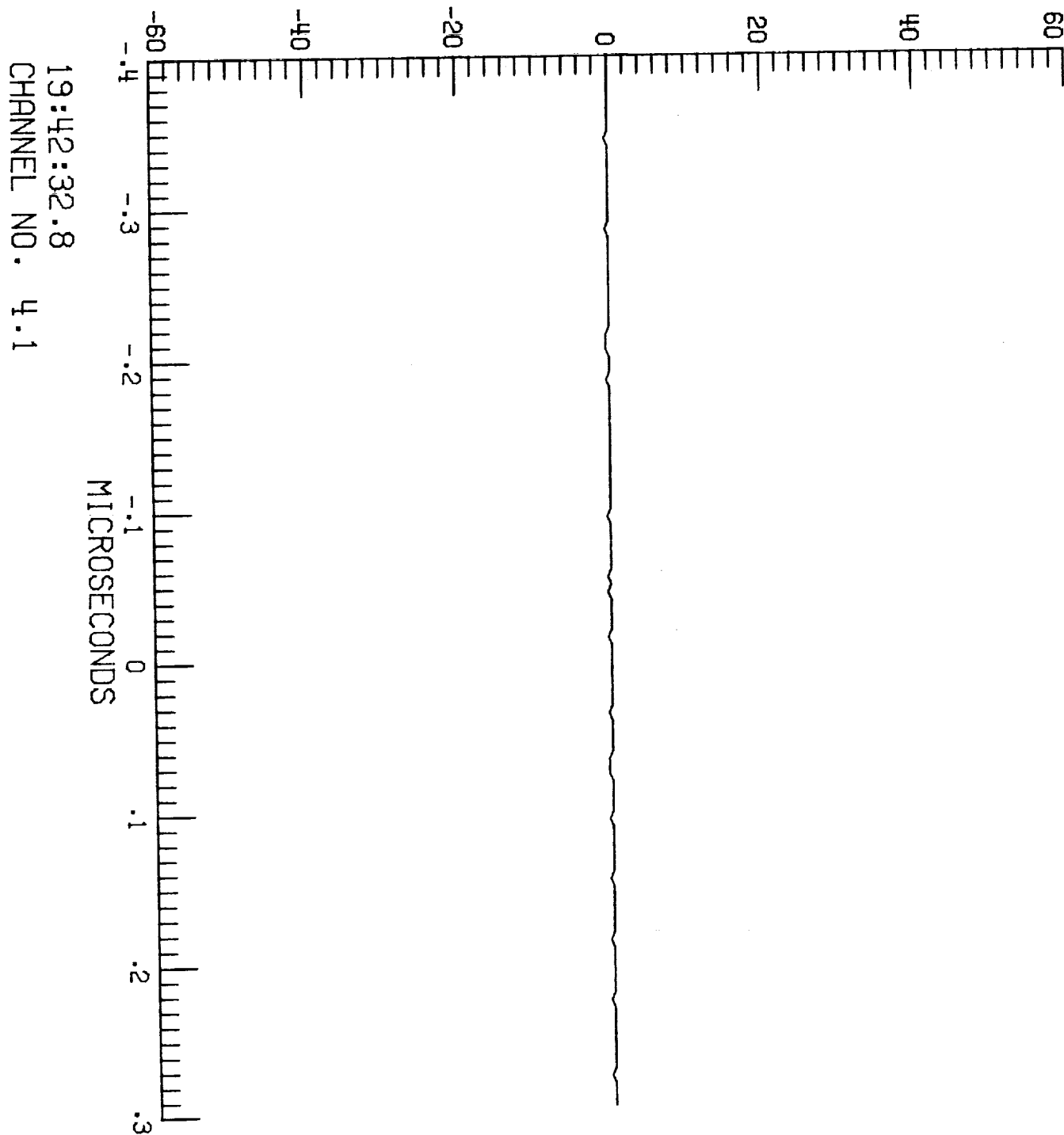
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 9

S.044

TP 101

V_{fb} V



F-108 LIGHTNING/ 84-037

FC4 RUN NO. 9

TP123 A

19:42:32.8
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
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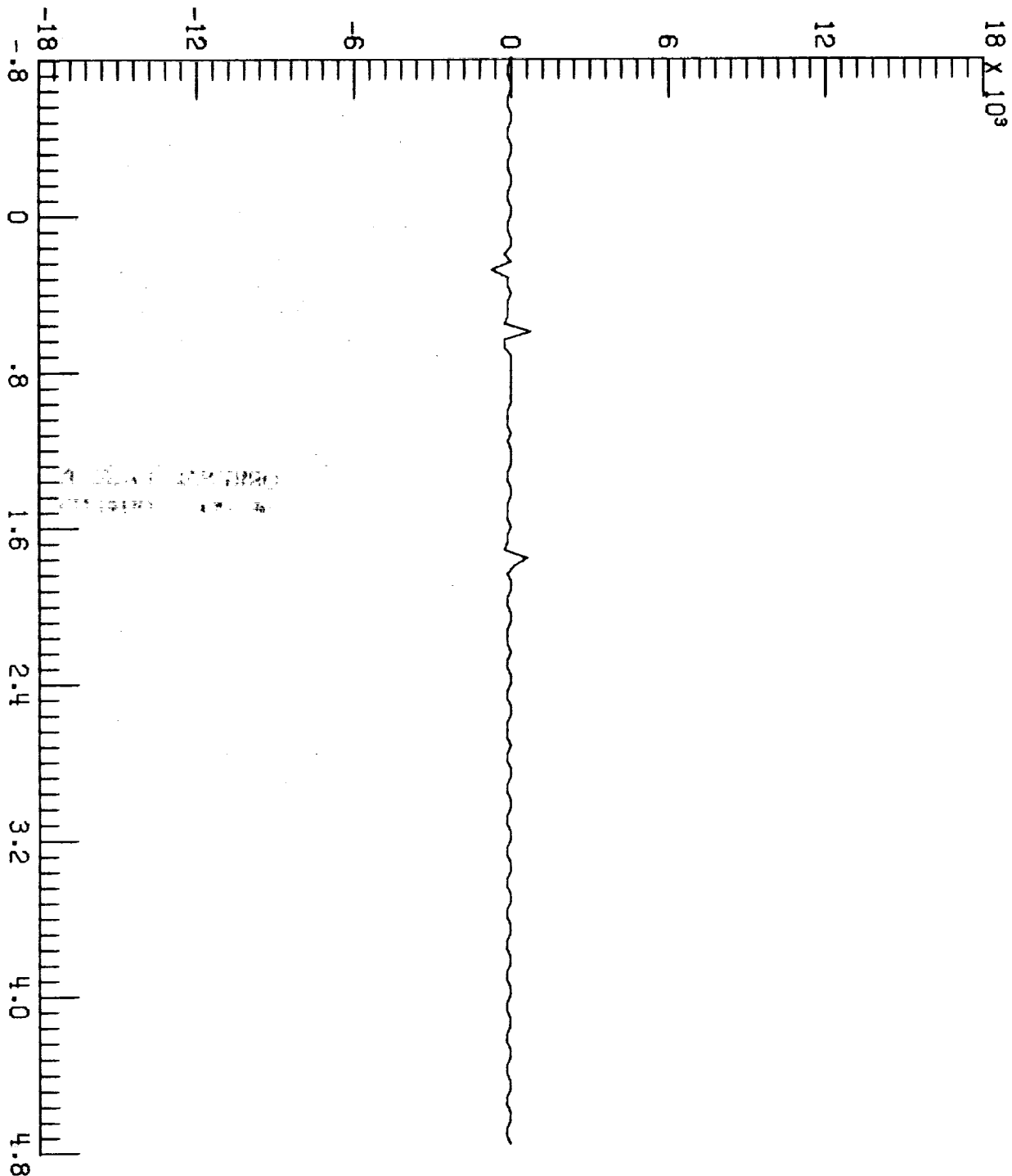
F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 10

S.052

I_n A

18×10^3

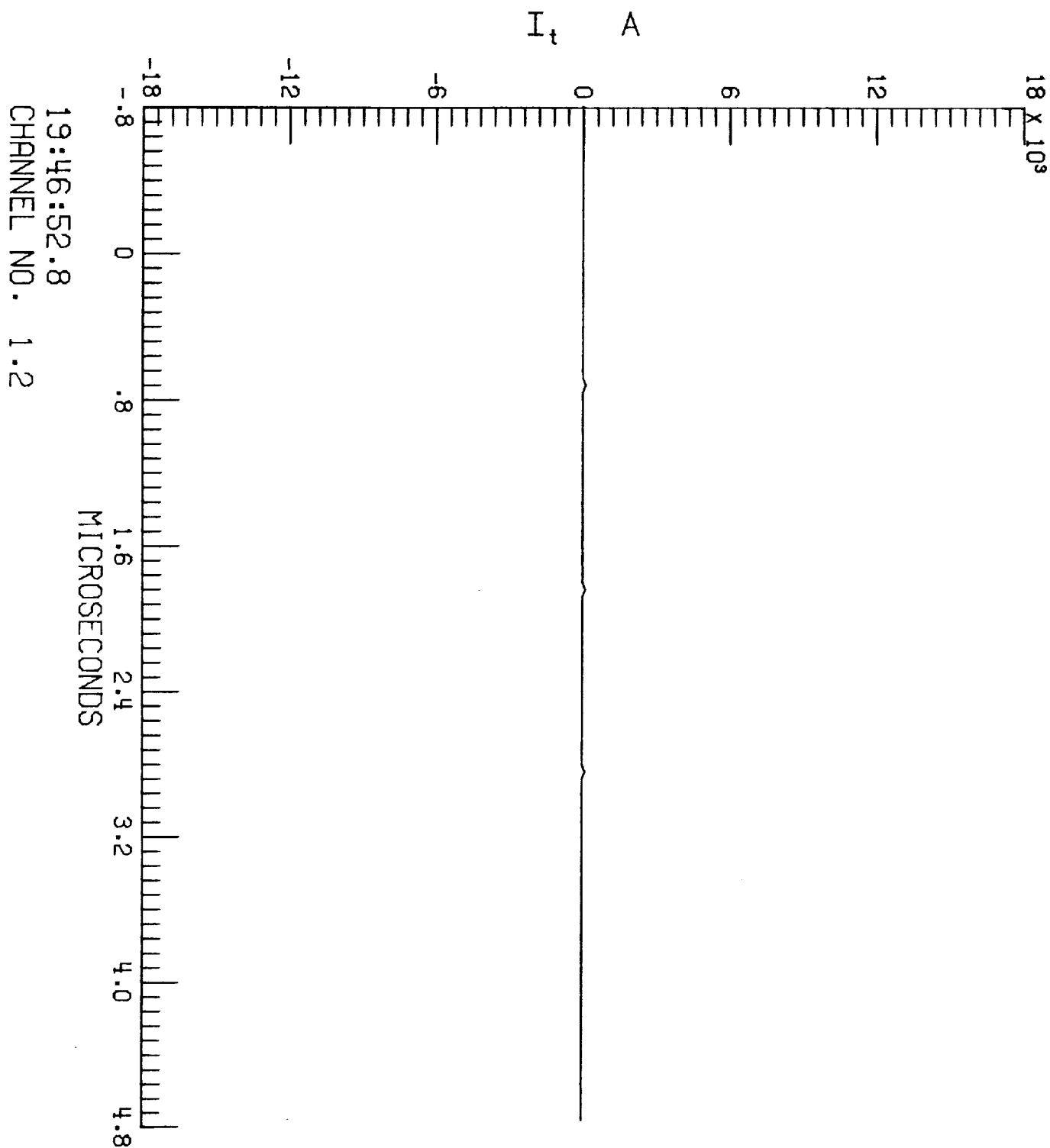


19:46:52.8
CHANNEL NO. 1.1

F-106 LIGHTNING/ 84-037

LEC 1 . RUN NO. 10

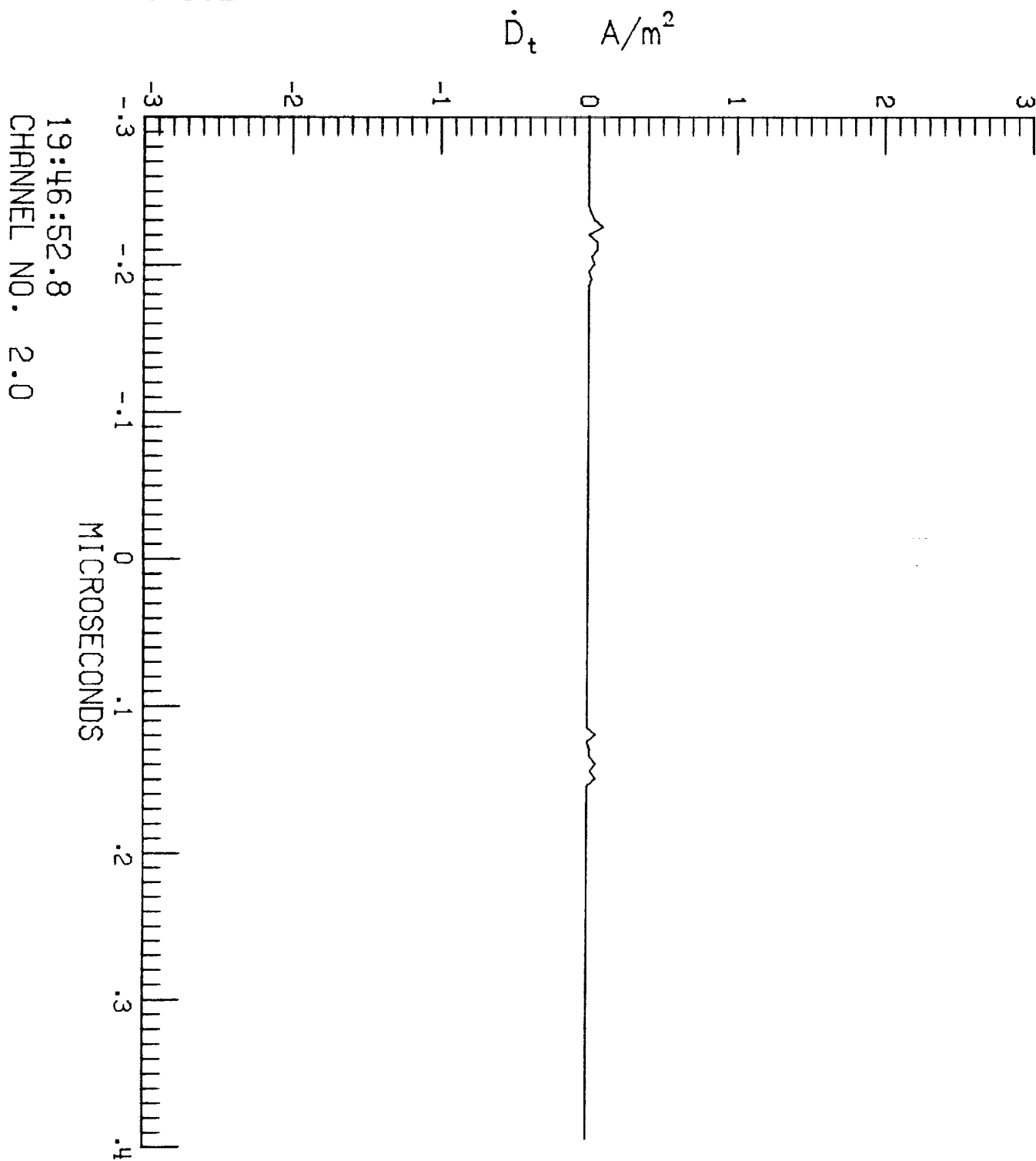
S.052



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 10

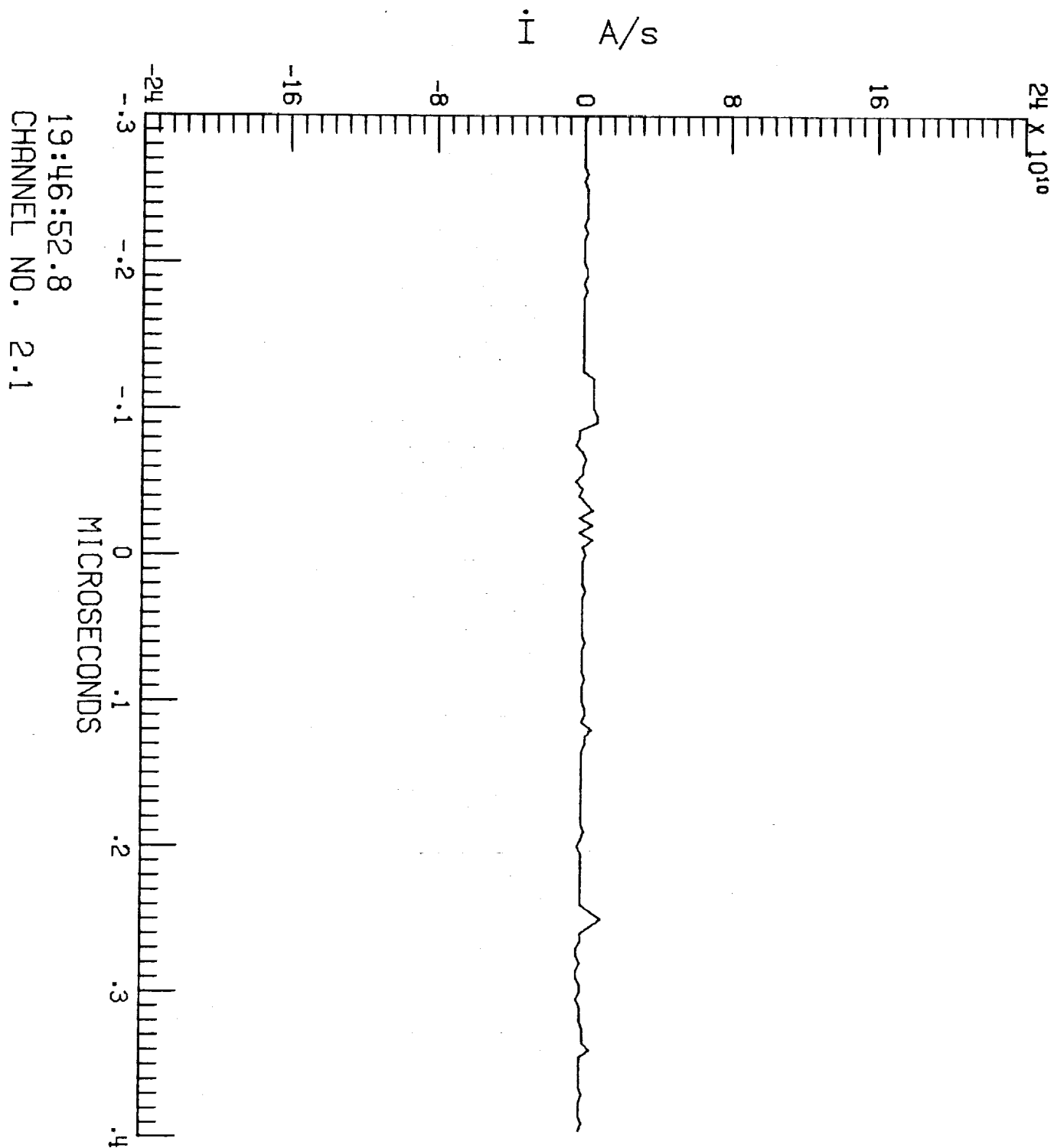
S.052



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 10

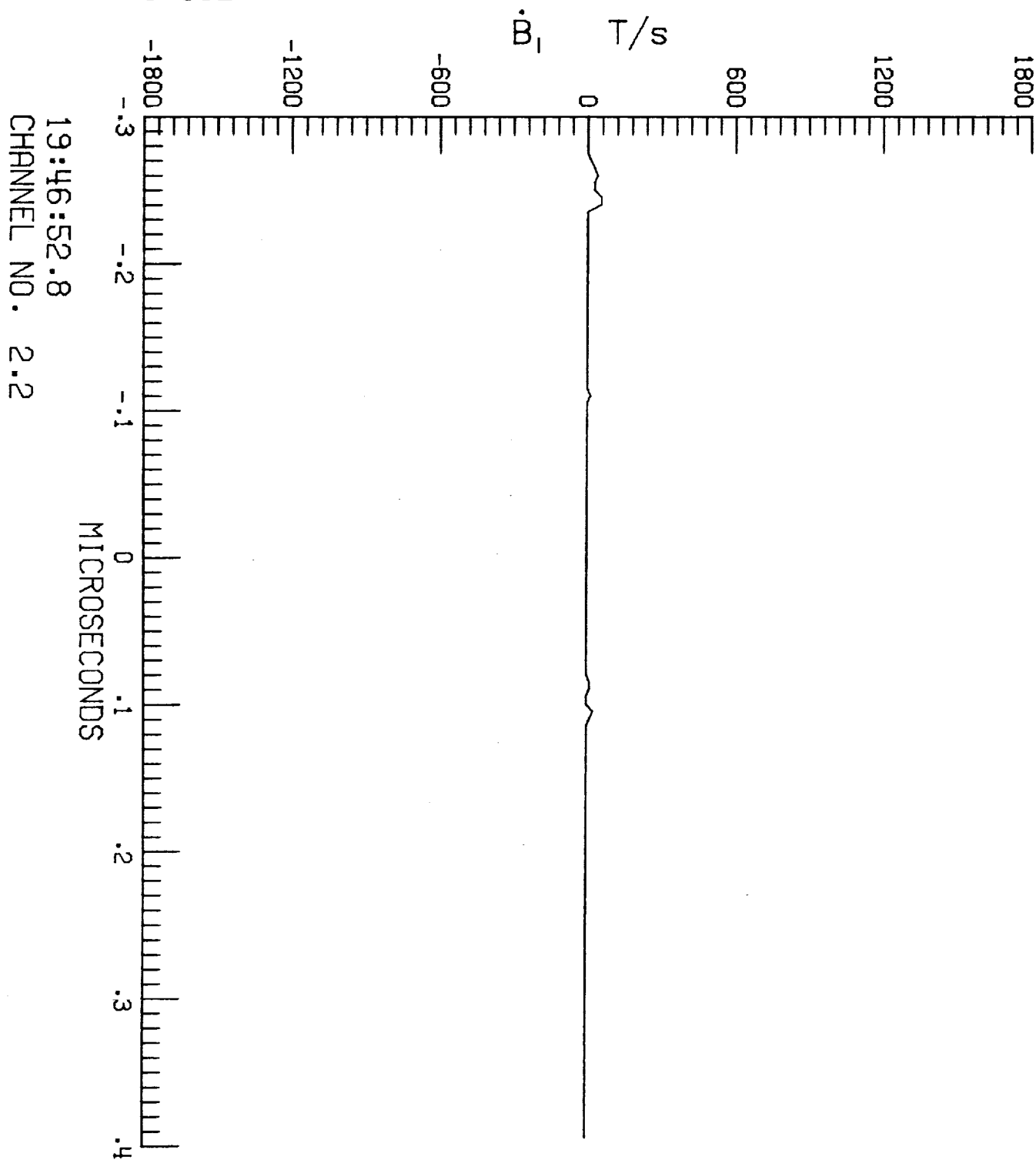
S.052



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 10

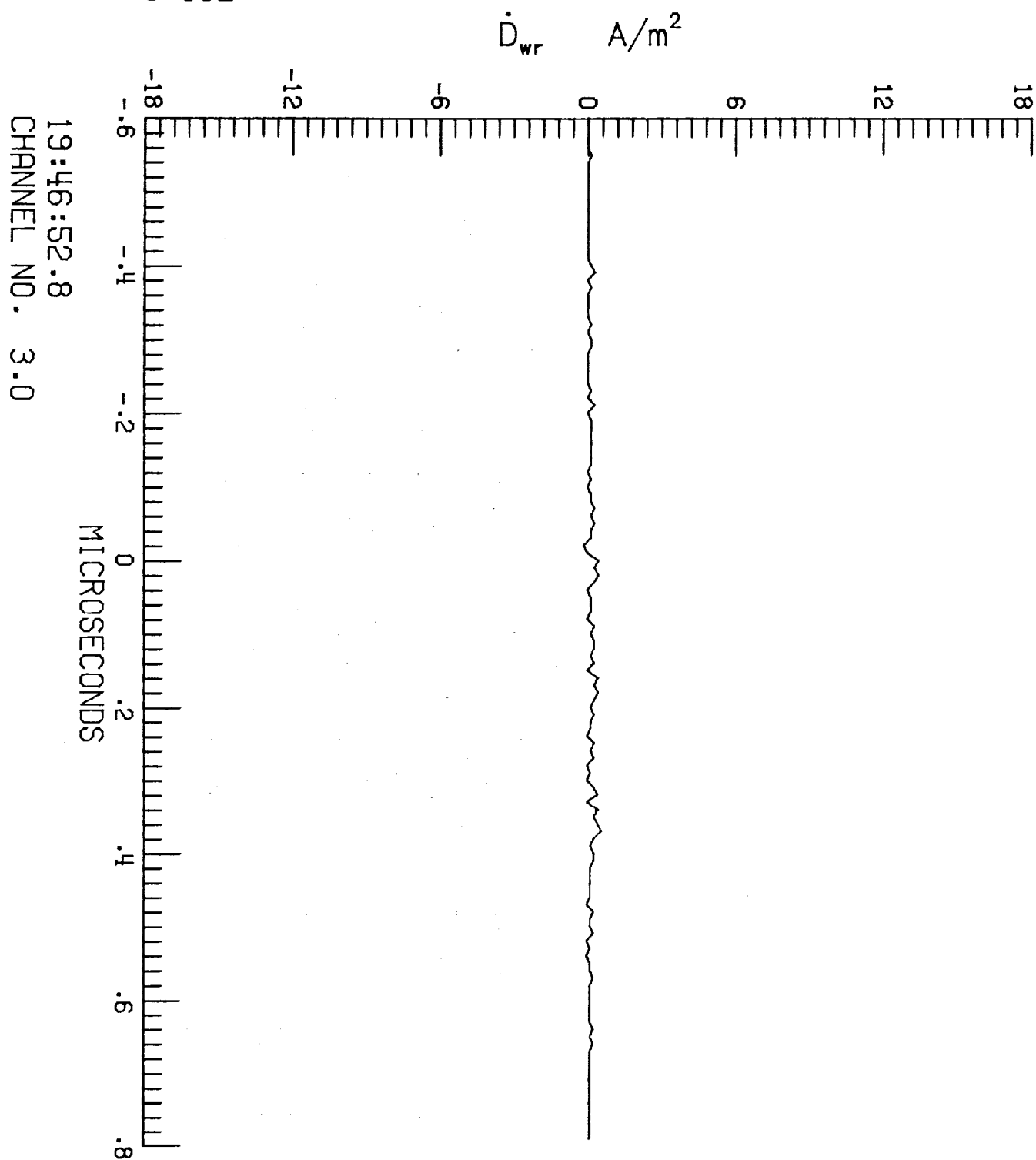
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F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 10

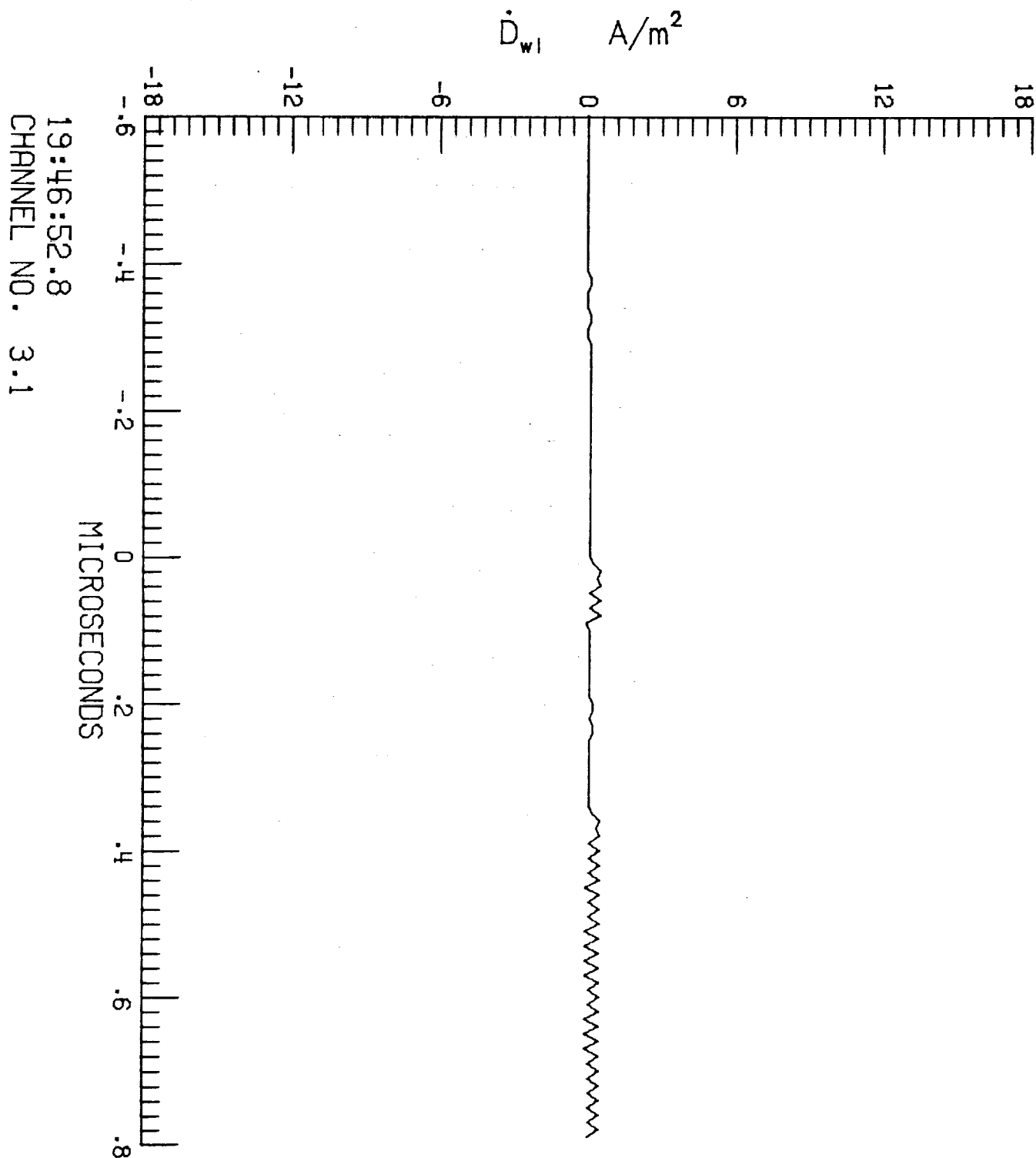
S.052



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 10

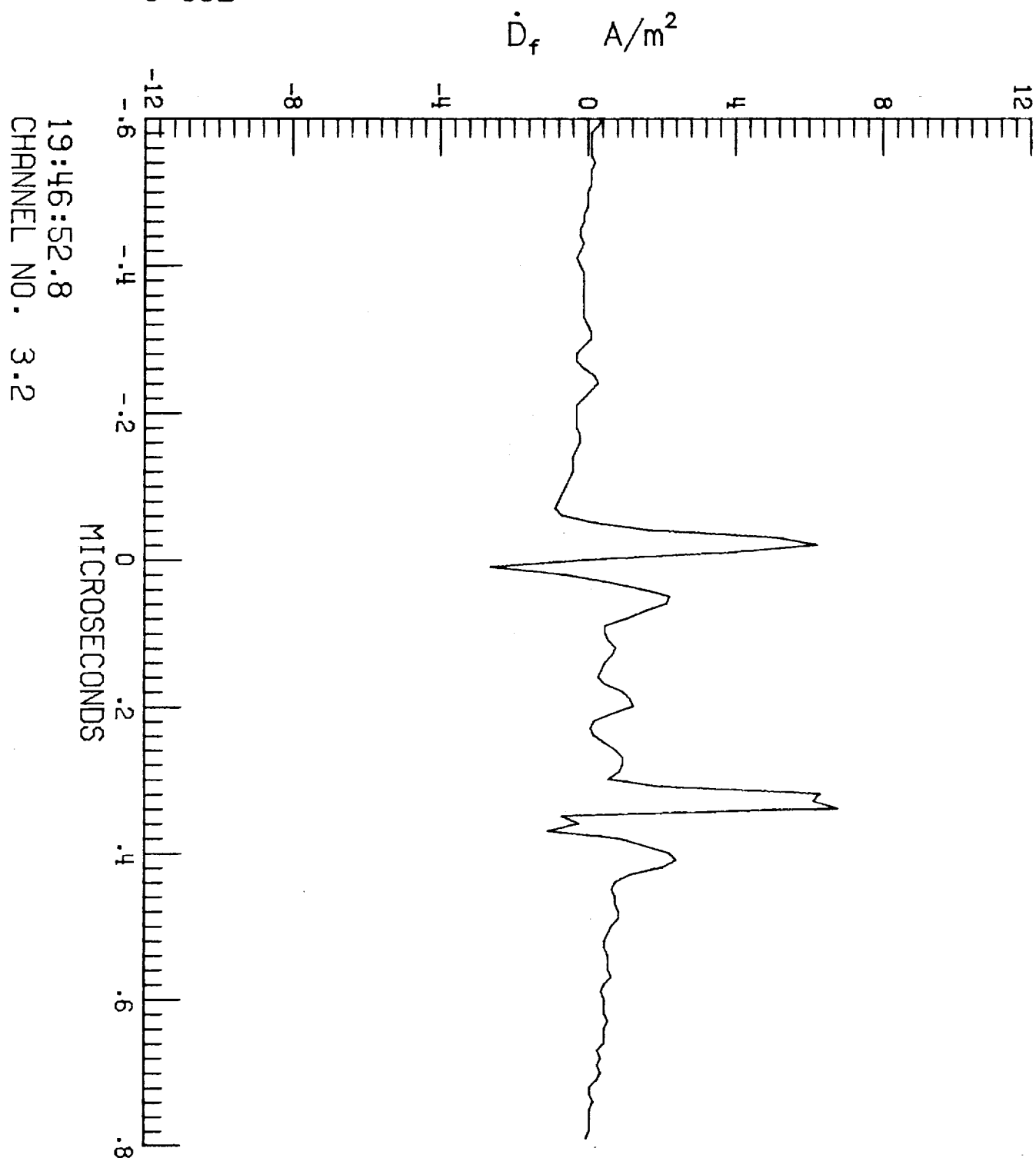
S.052



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 10

S.052



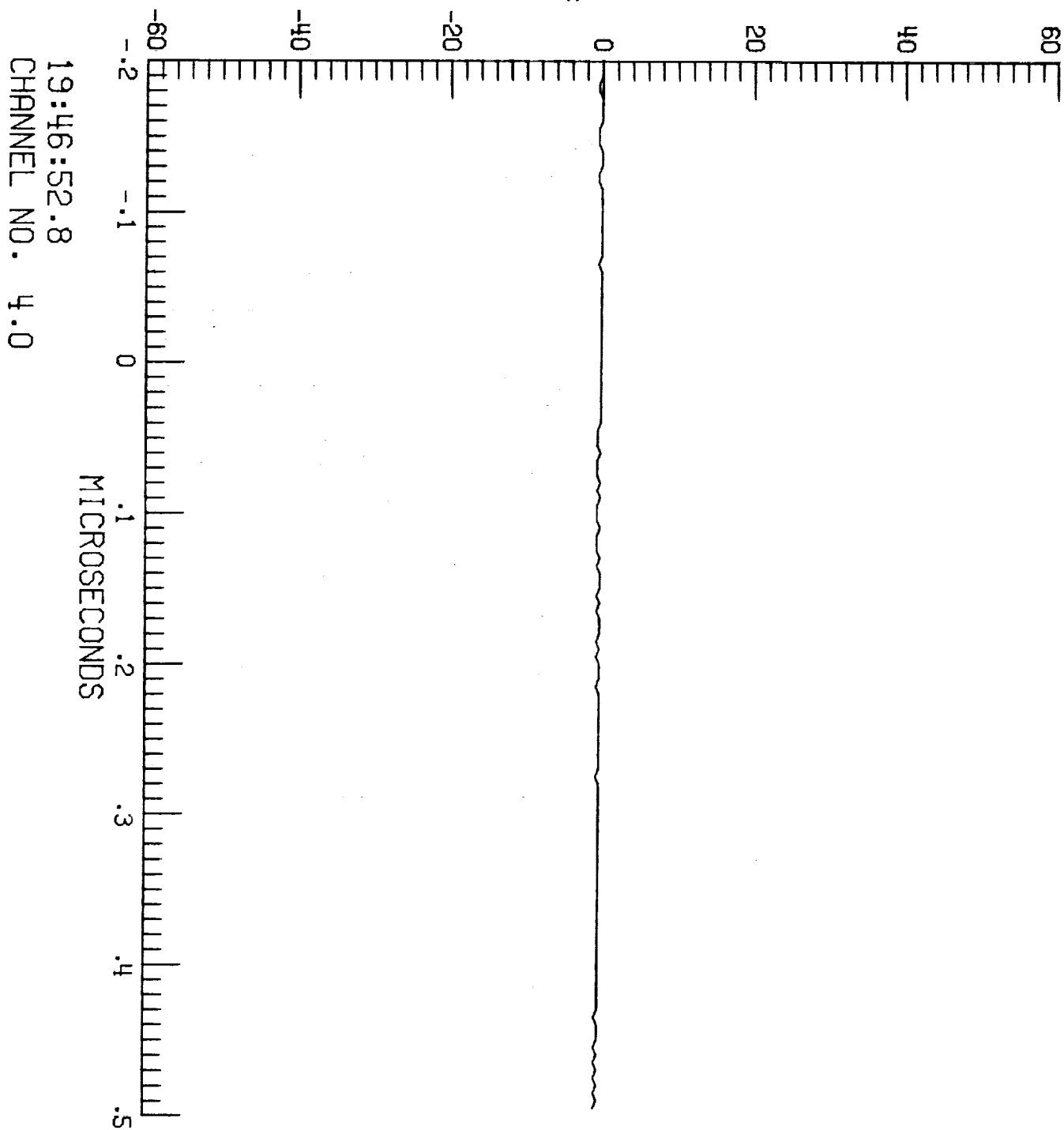
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 10

S.052

TP 100

V_w V



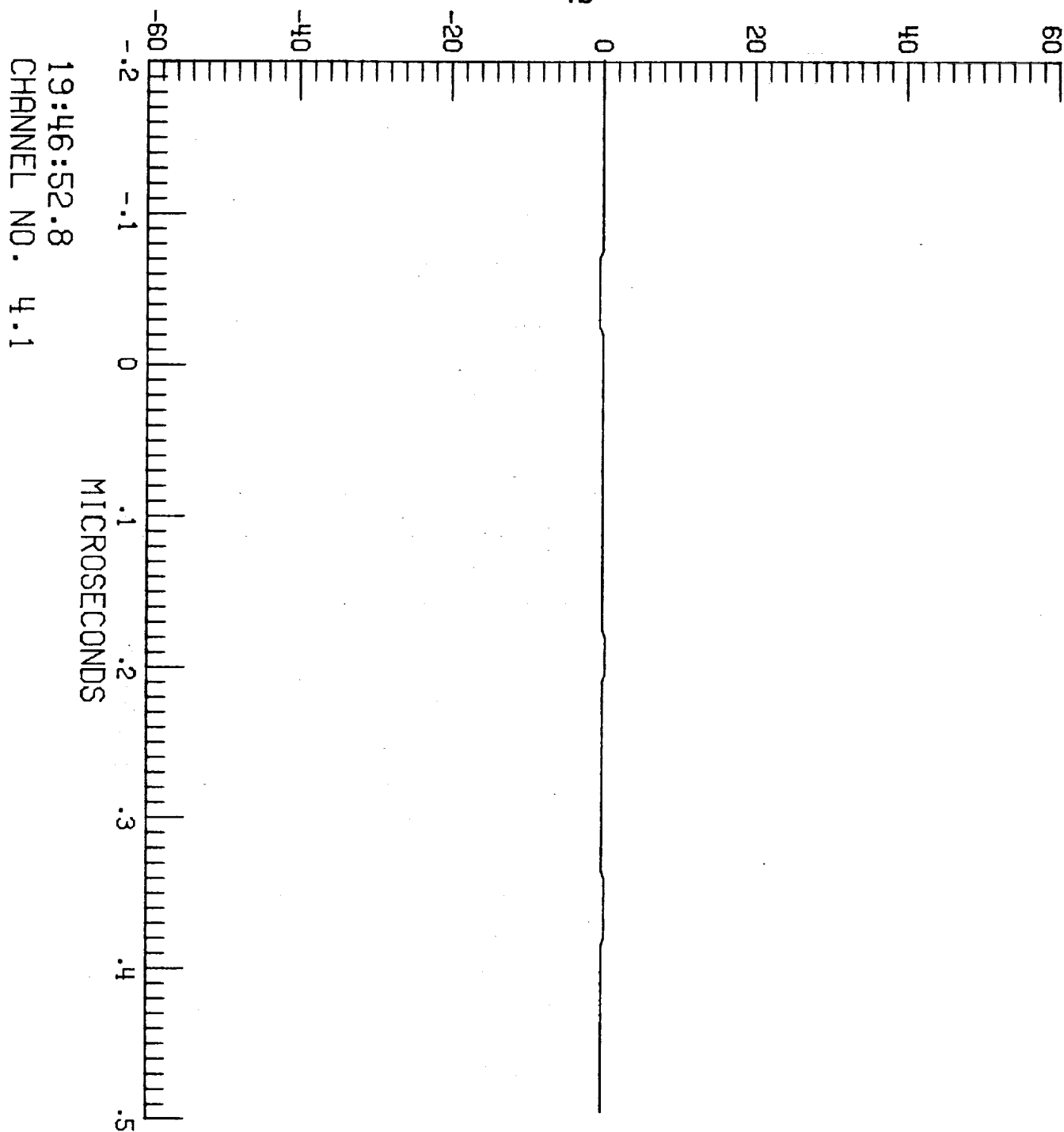
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 10

S.052

TP 101

V_{fb} V

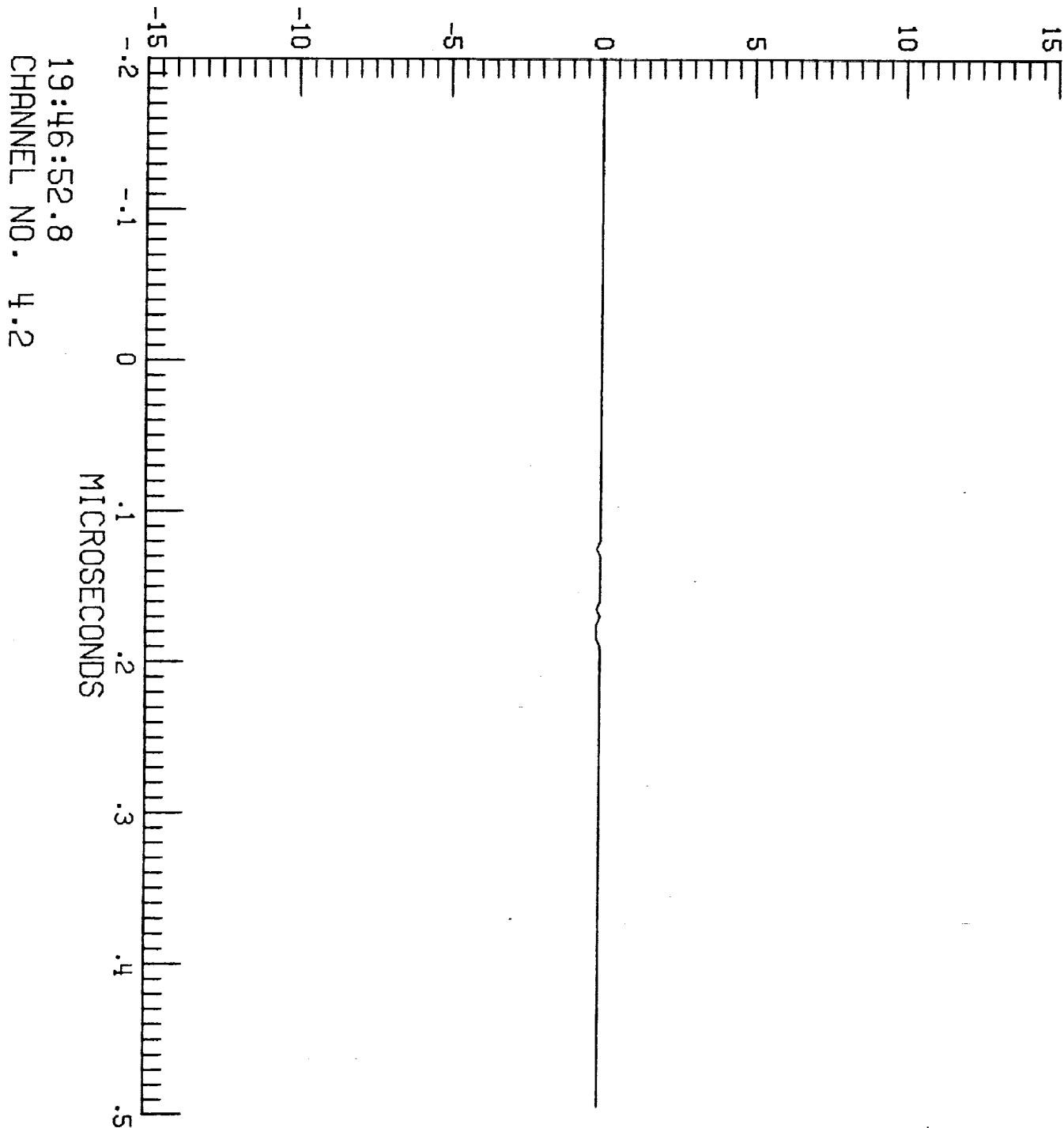


F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 10

S.052

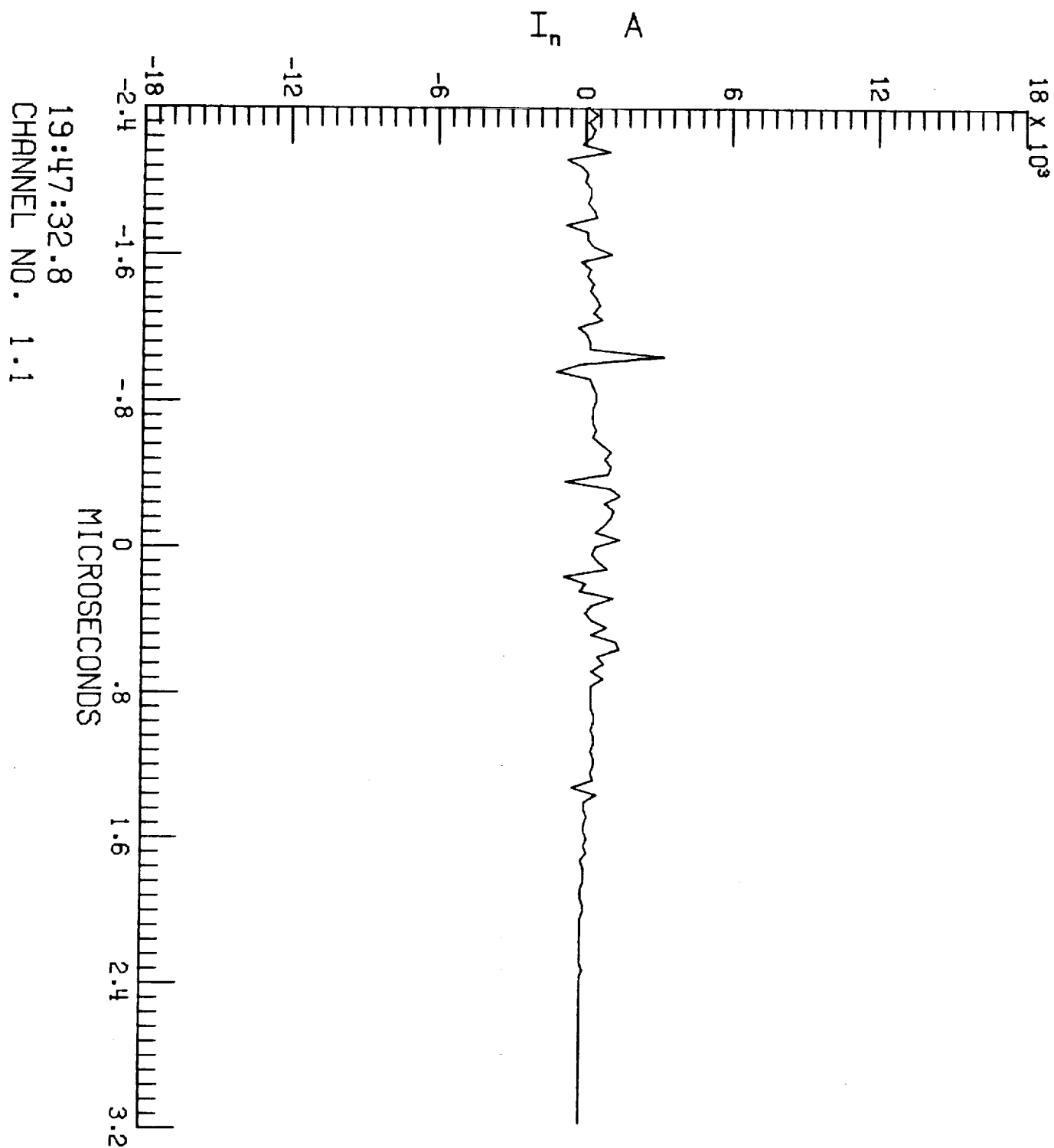
TP123 A



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 12

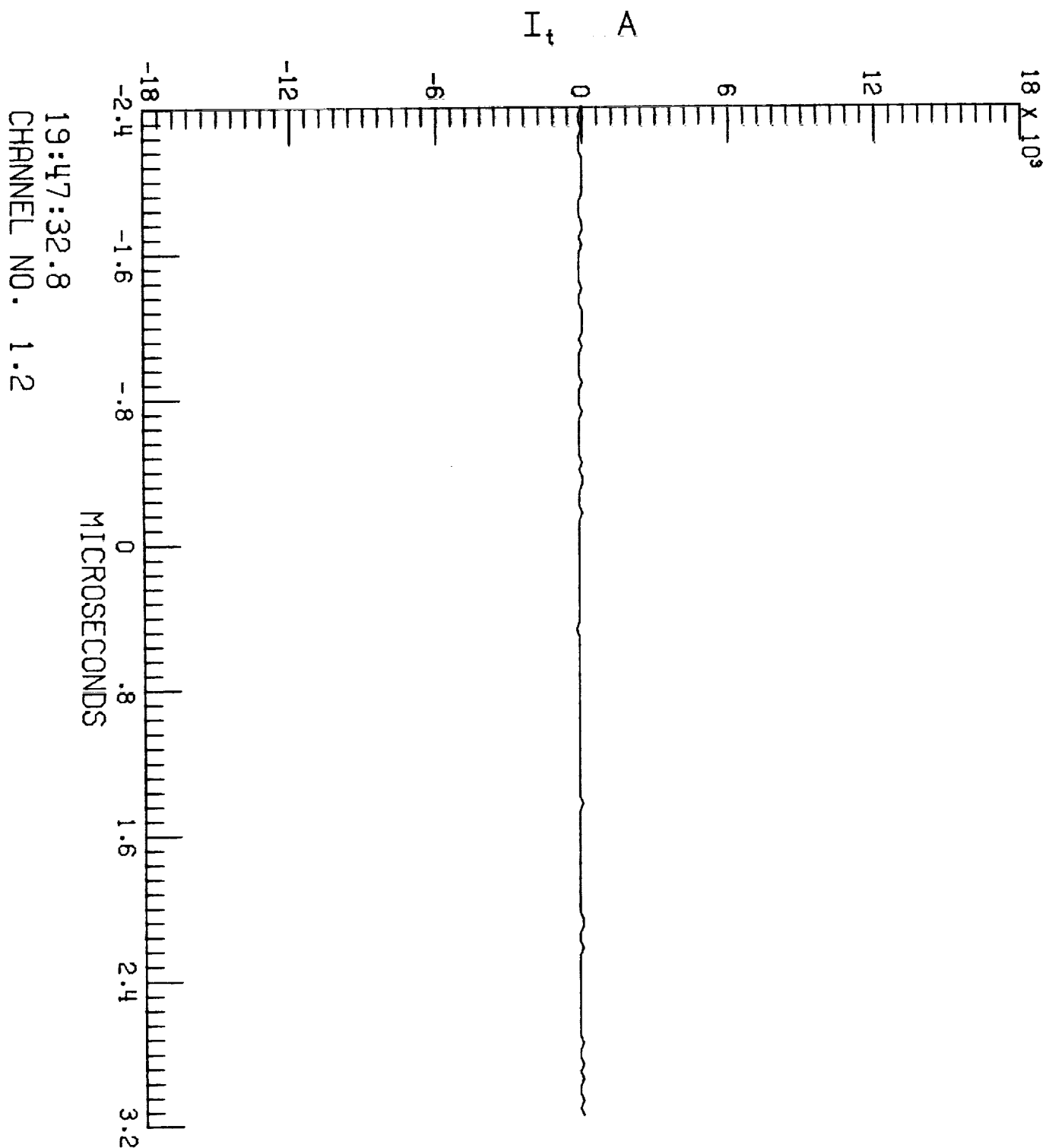
S.055



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 12

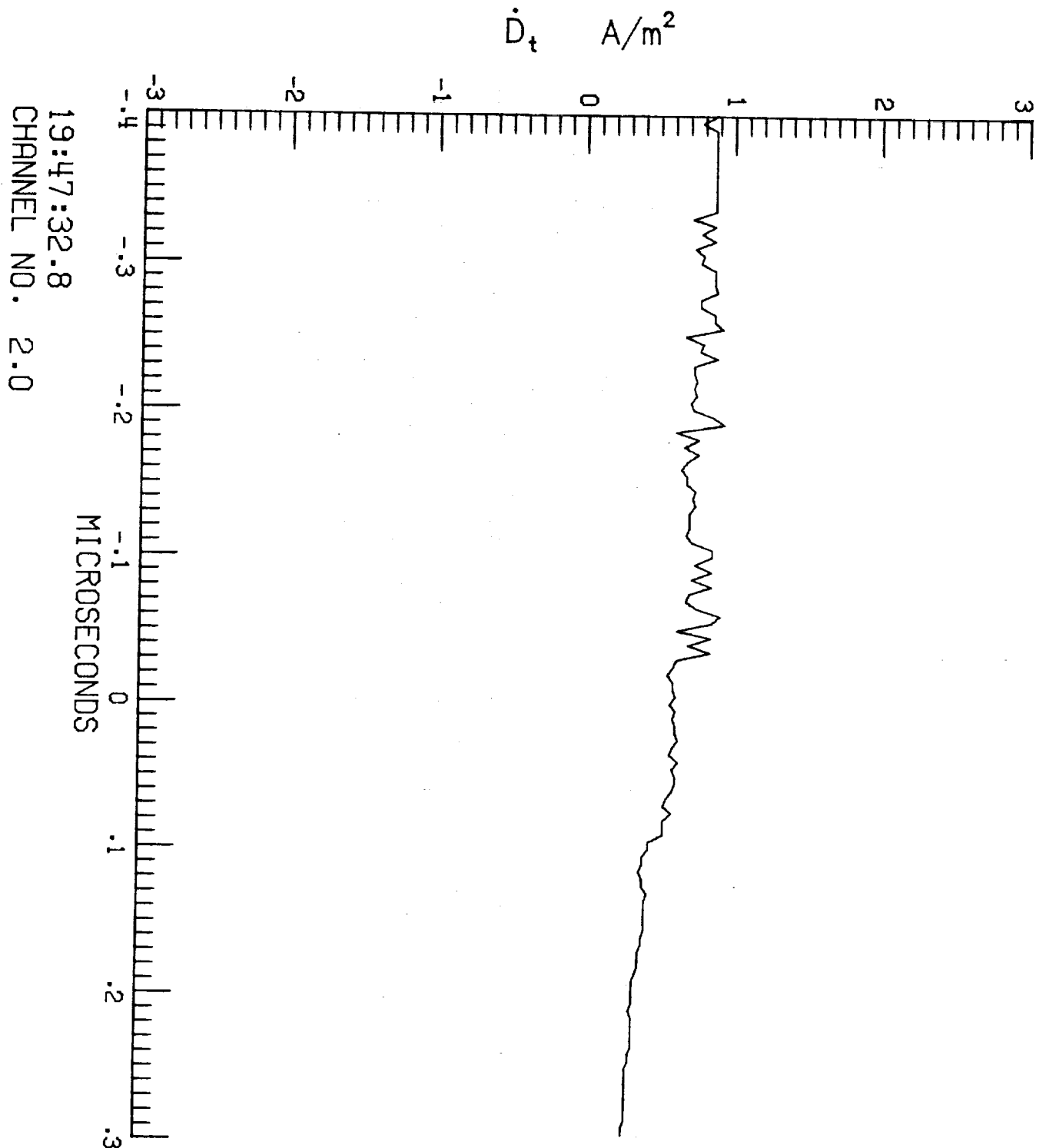
S.055



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 12

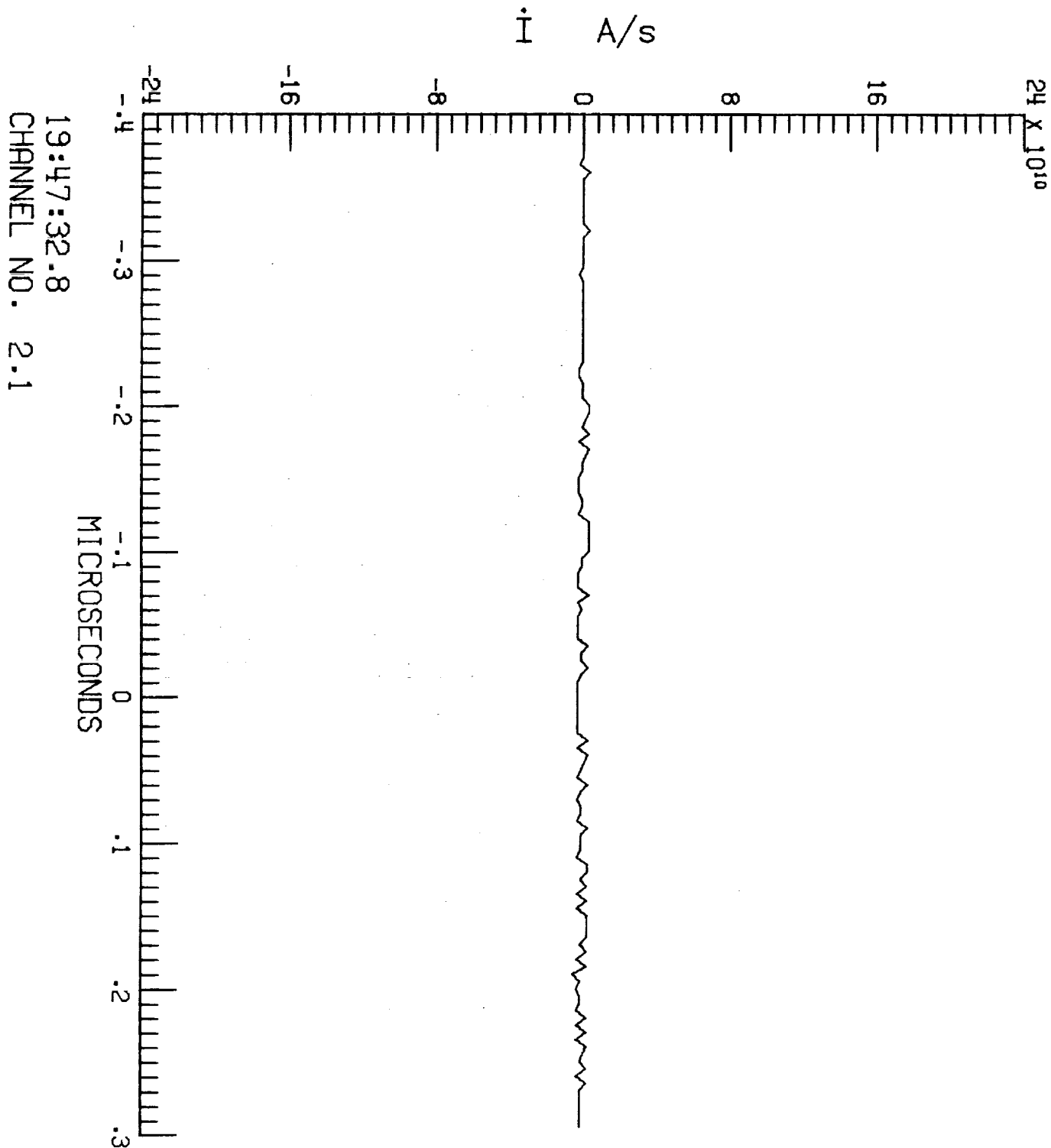
S.055



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 12

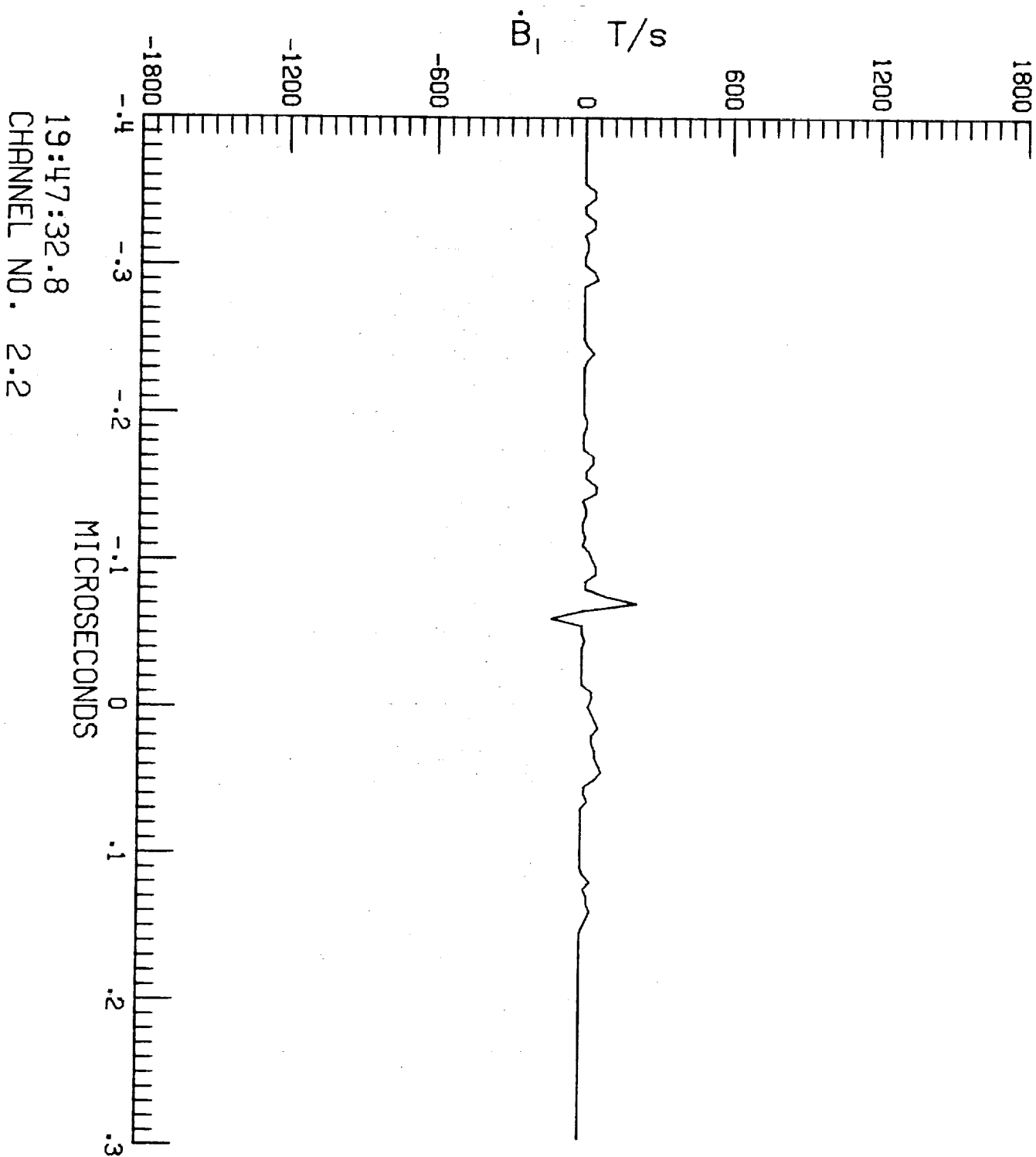
S.055



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 12

S.055

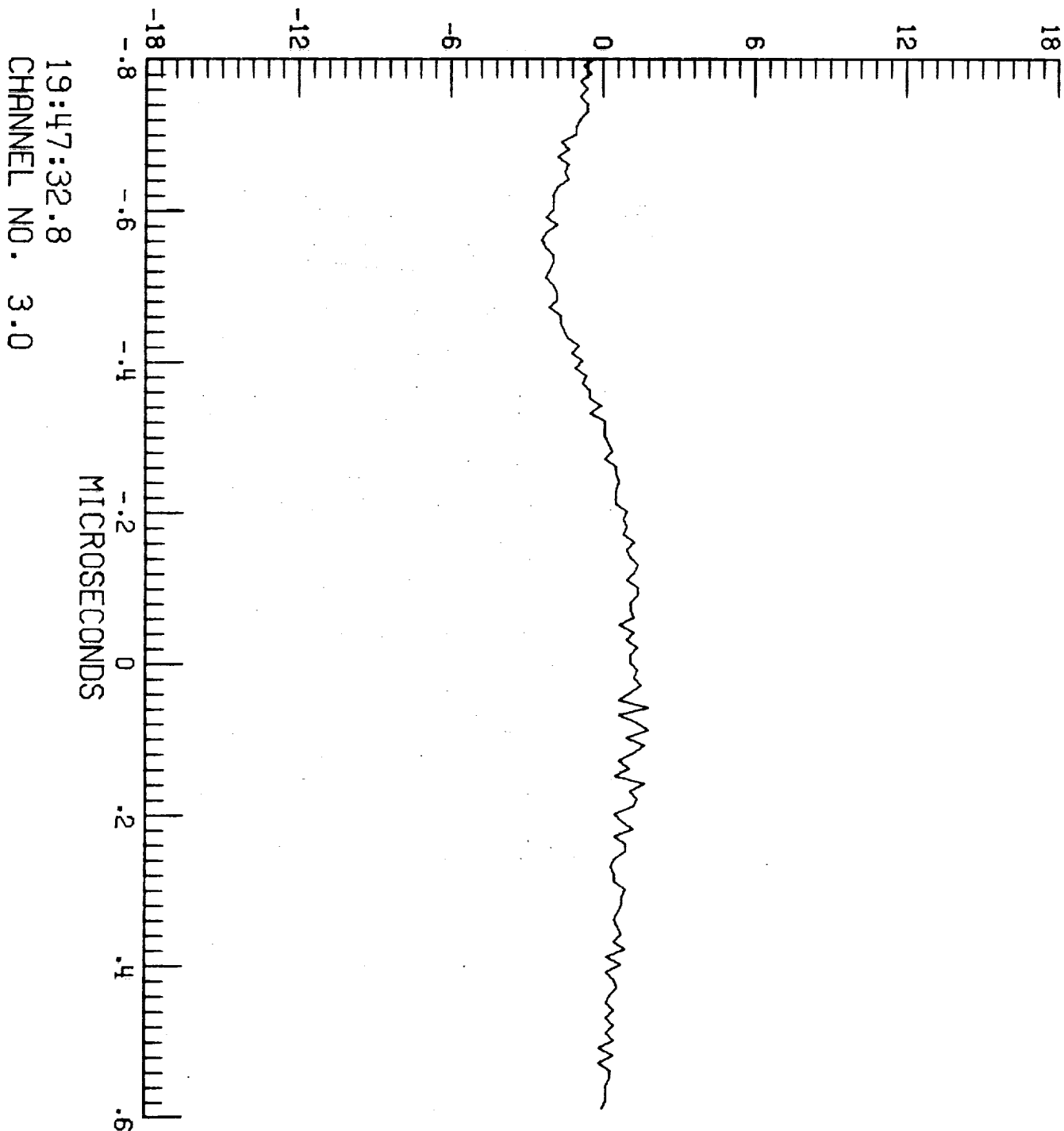


F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 12

S.055

\dot{D}_{wr} A/m²

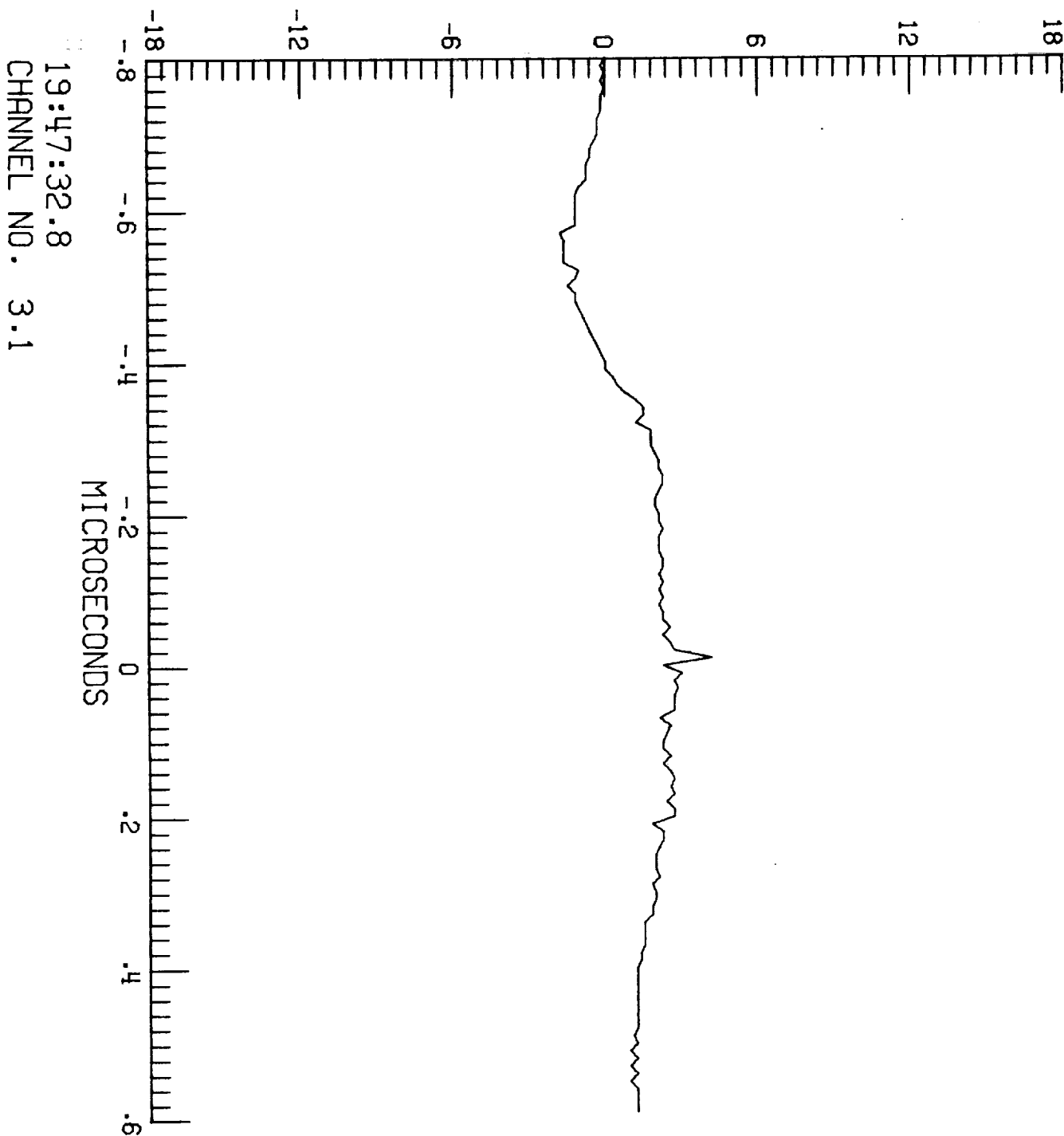


F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 12

S.055

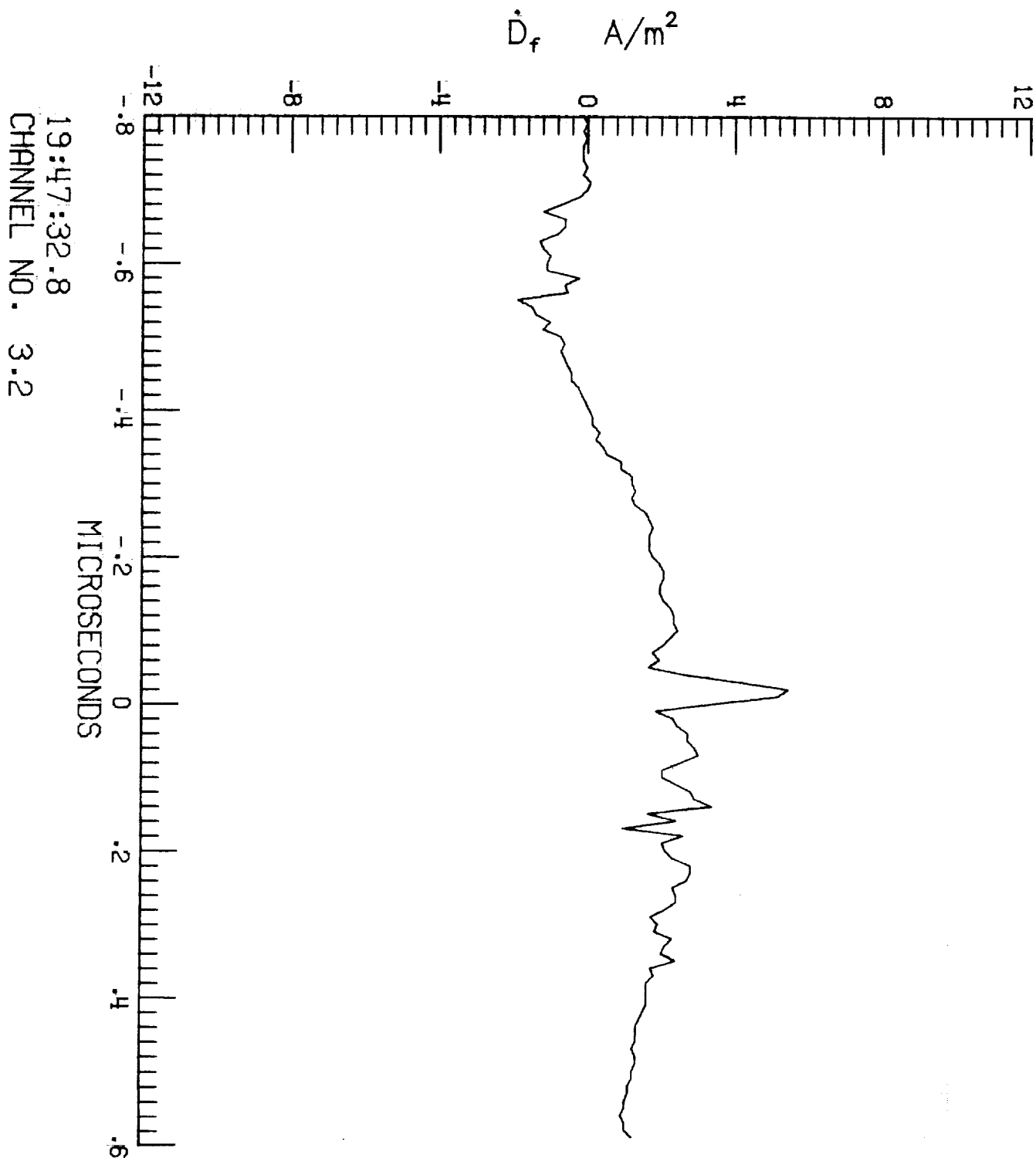
\dot{D}_{wl} A/m²



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 12

S.055



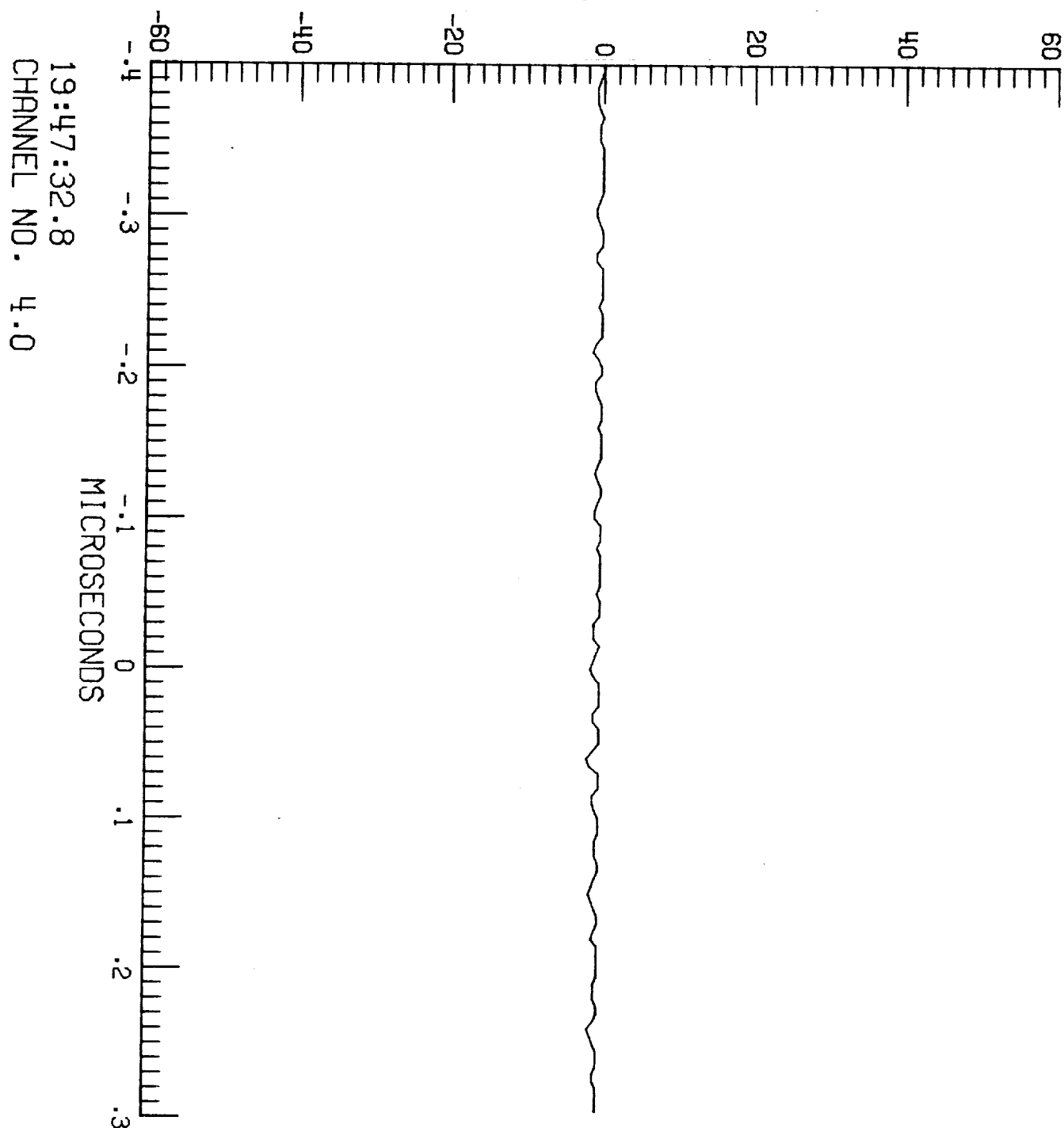
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 12

S.055

TP 100

V_w V



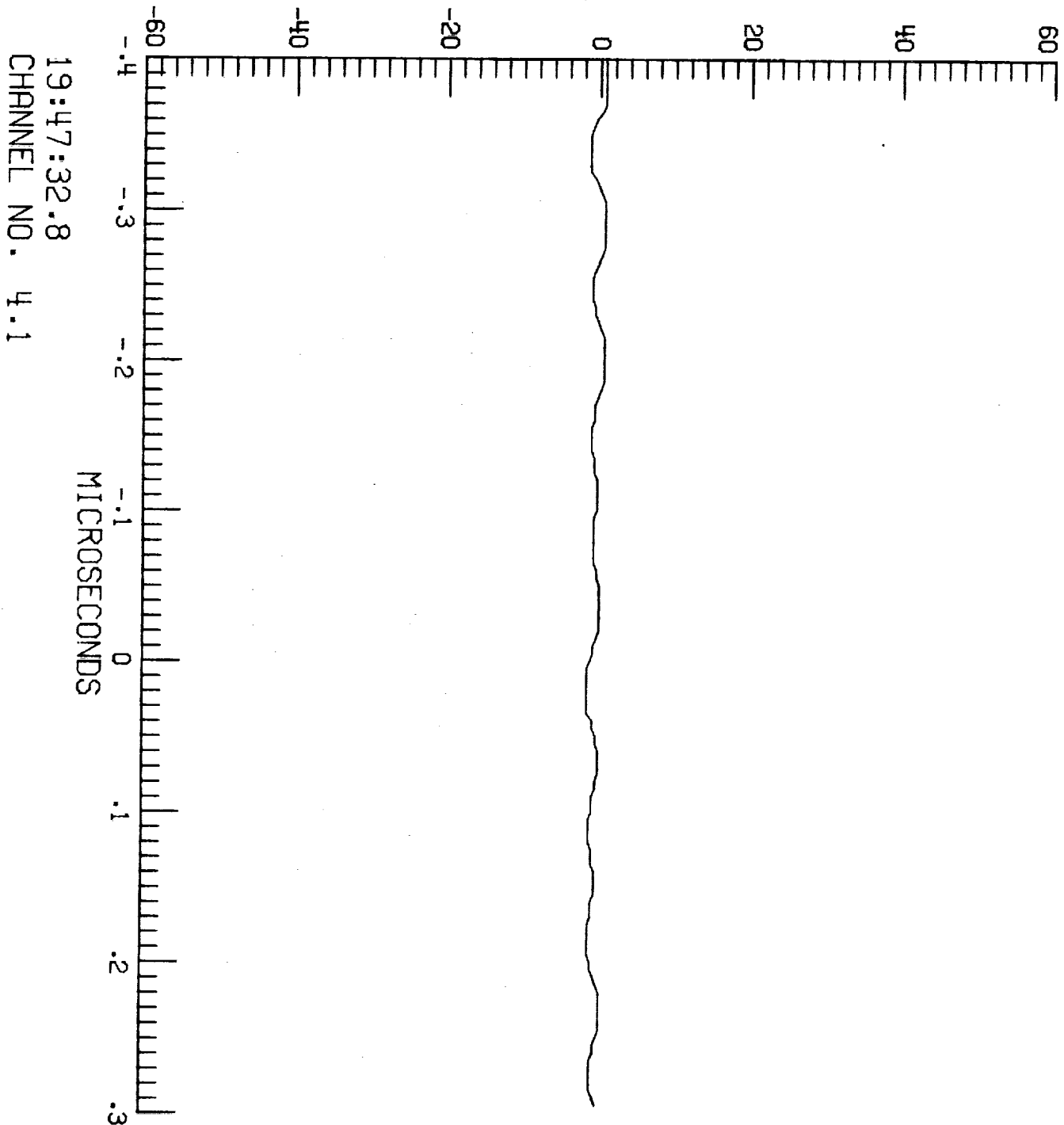
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 12

S.055

TP 101

V_{fb} V

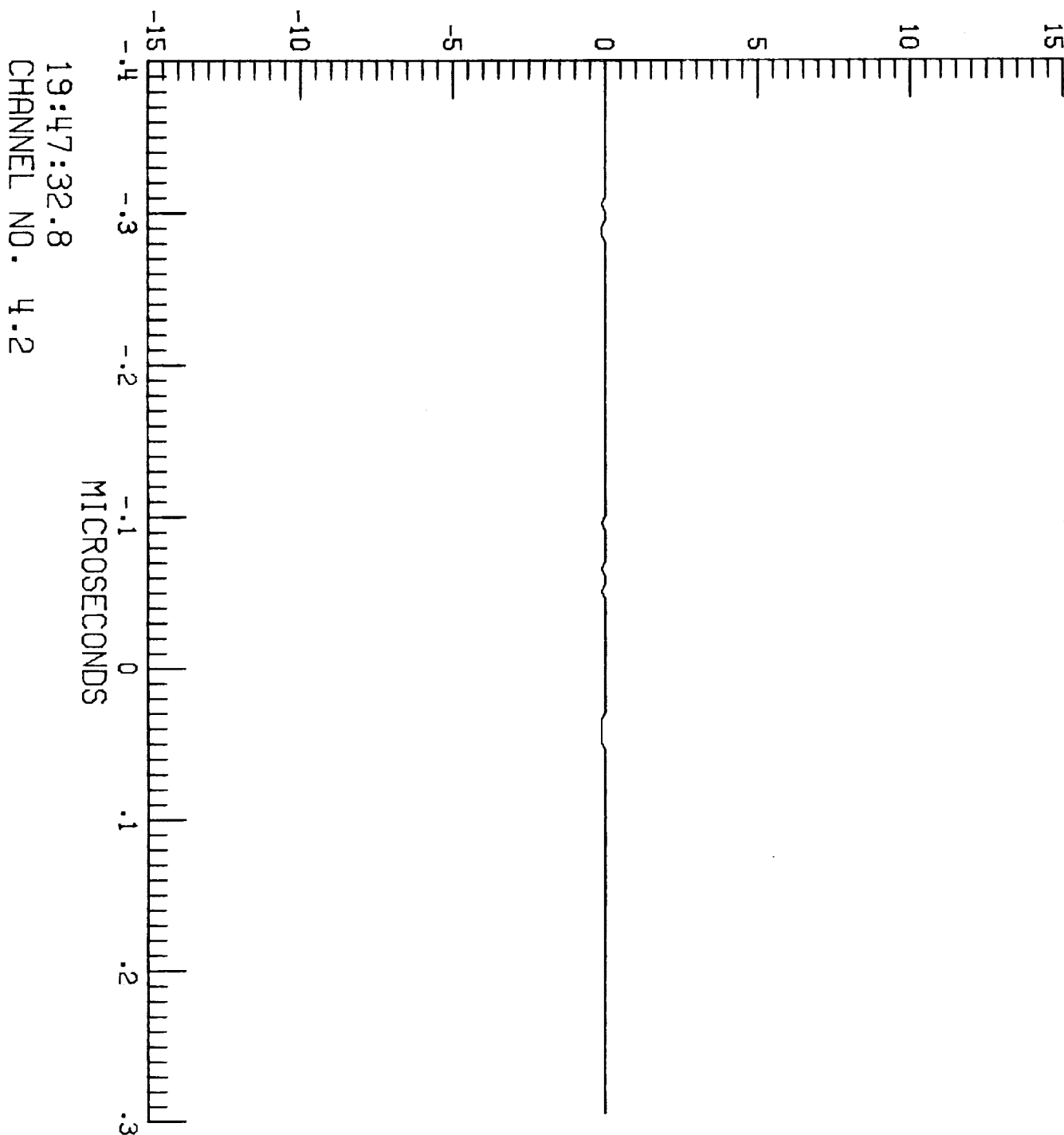


F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 12

S.055

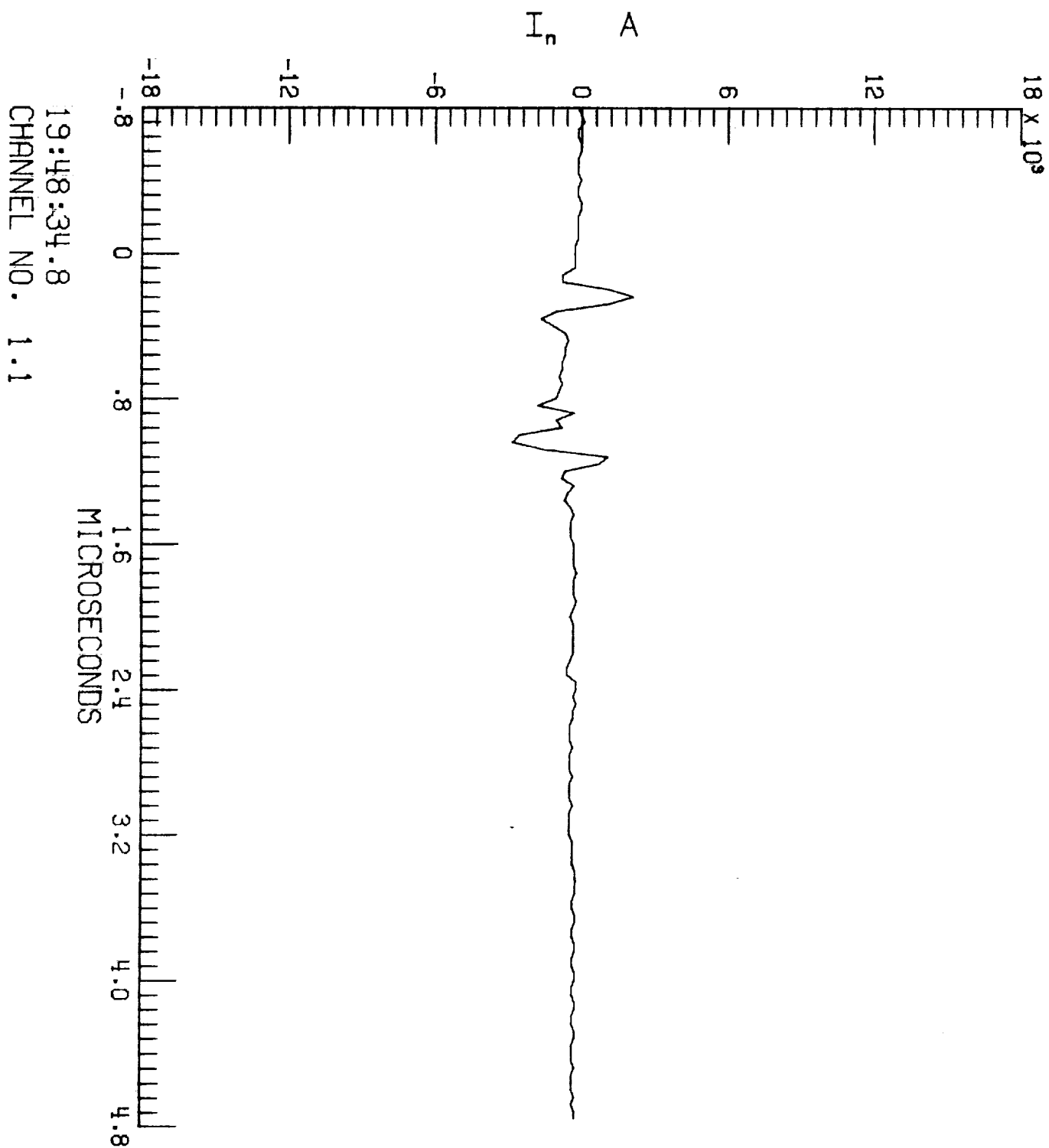
TP123 A



F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 13

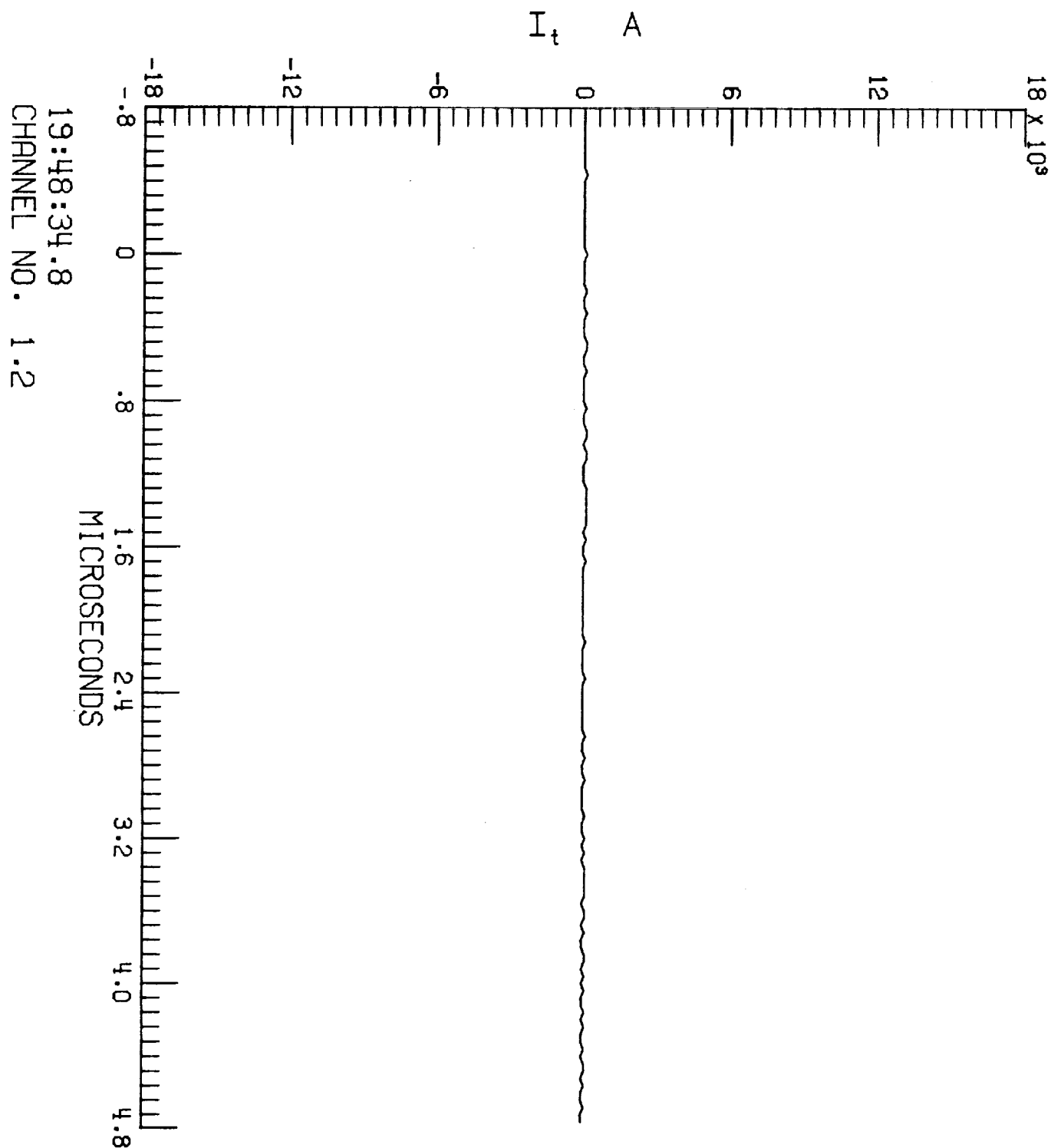
S.057



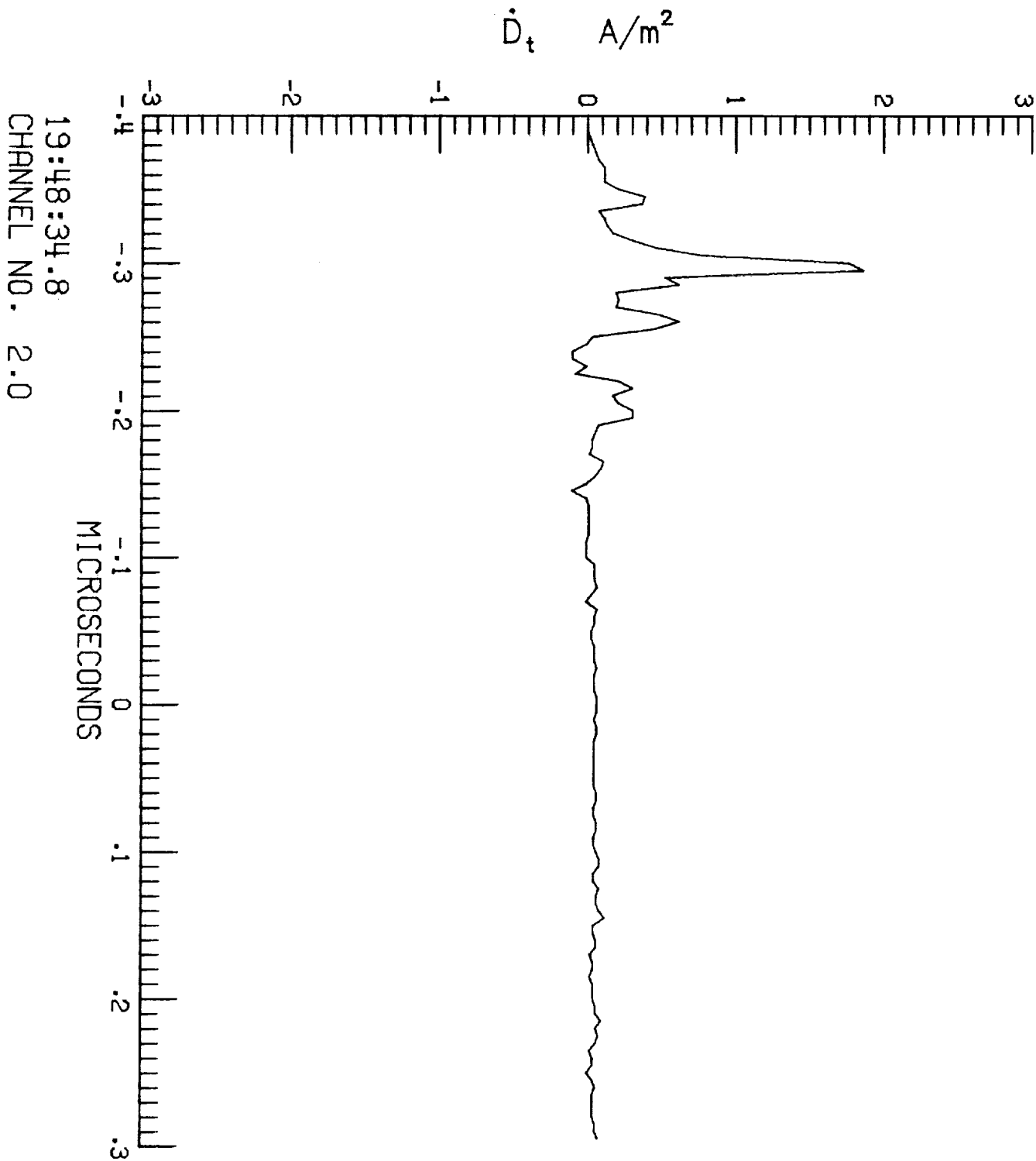
F-106 LIGHTNING/ 84-037

LEC 1 RUN NO. 13

S.057



S.057

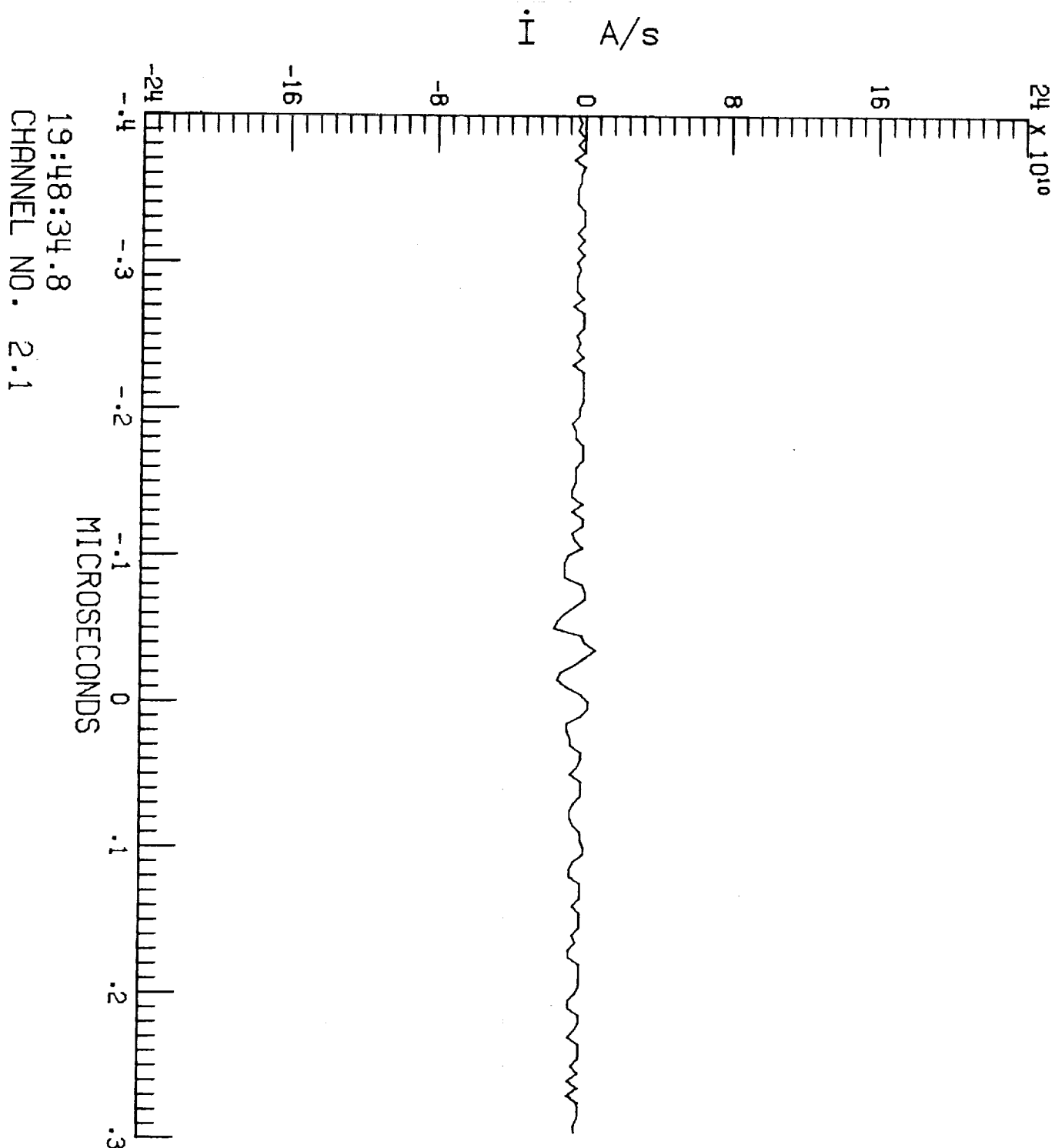


5-2

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 13

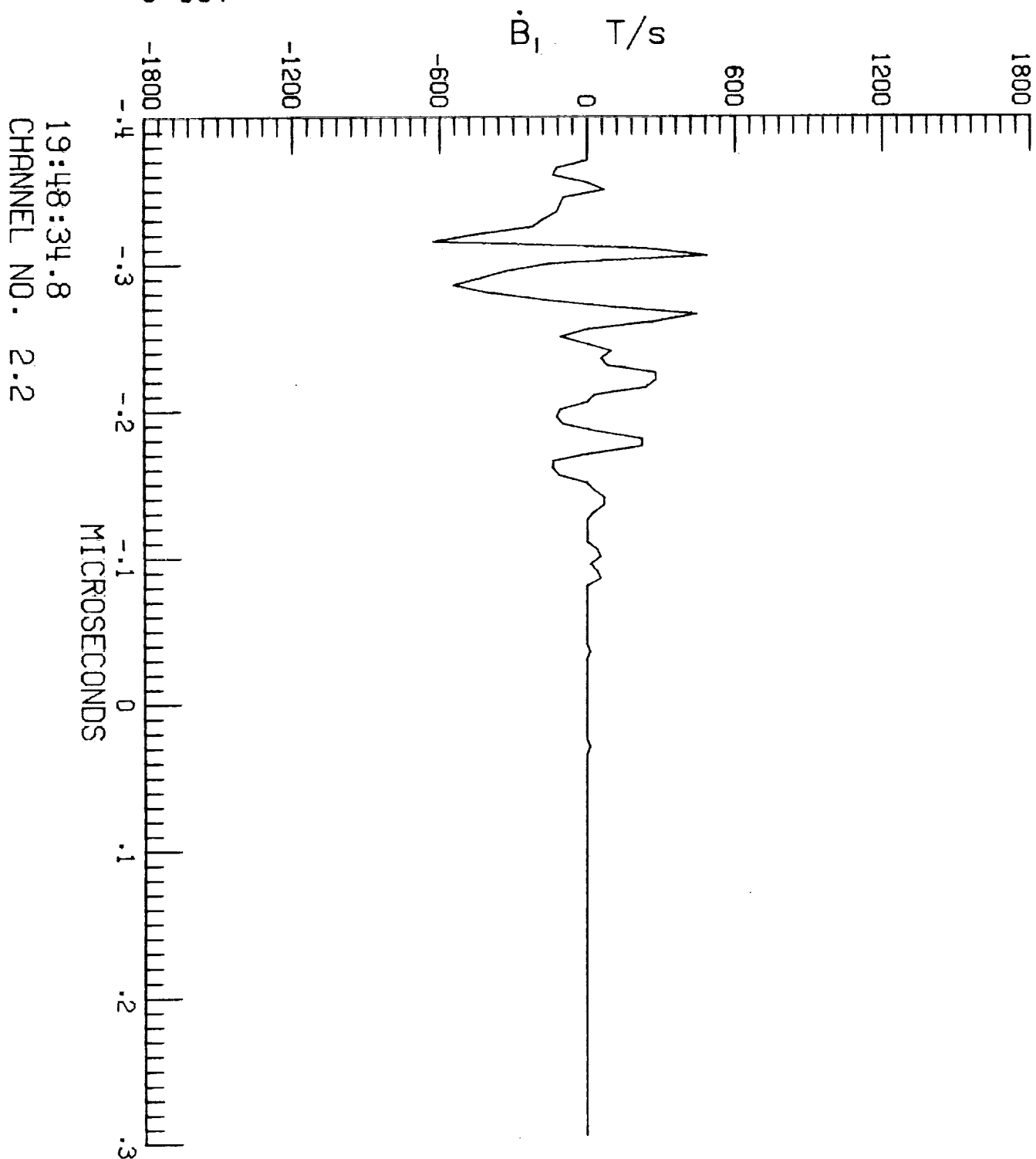
S.057



F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 13

S.057

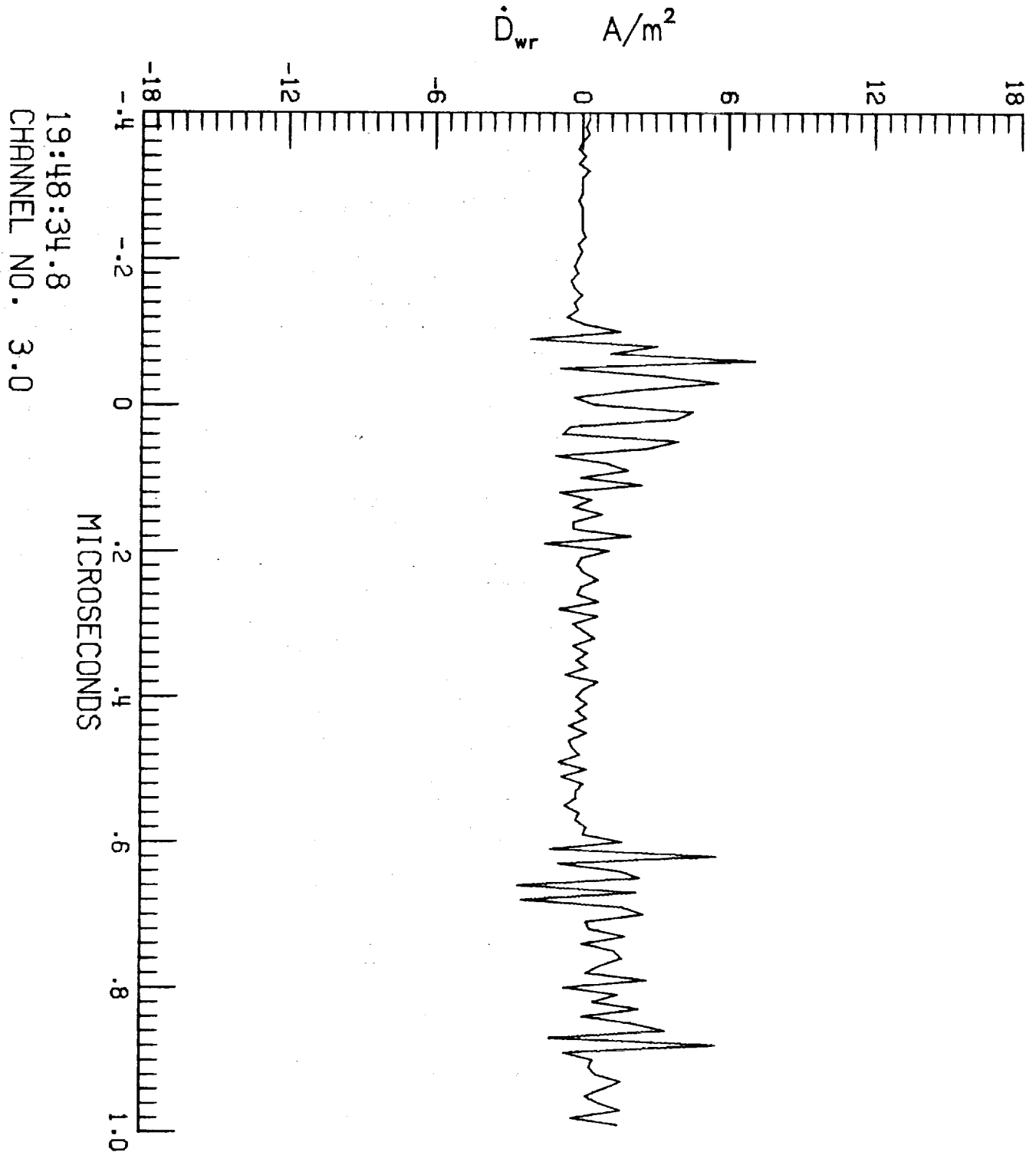


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OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 13

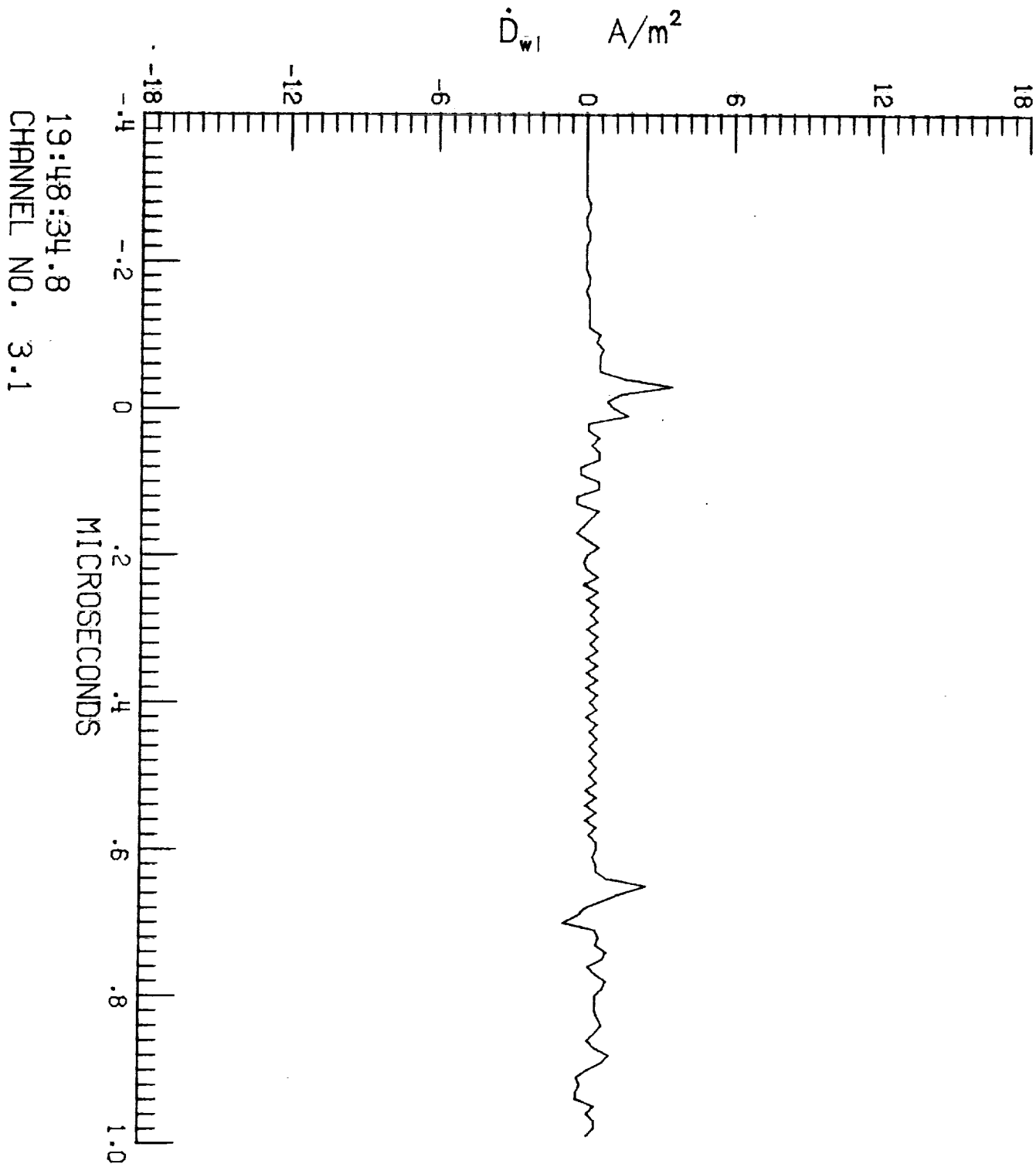
S.057



F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 13

S.057

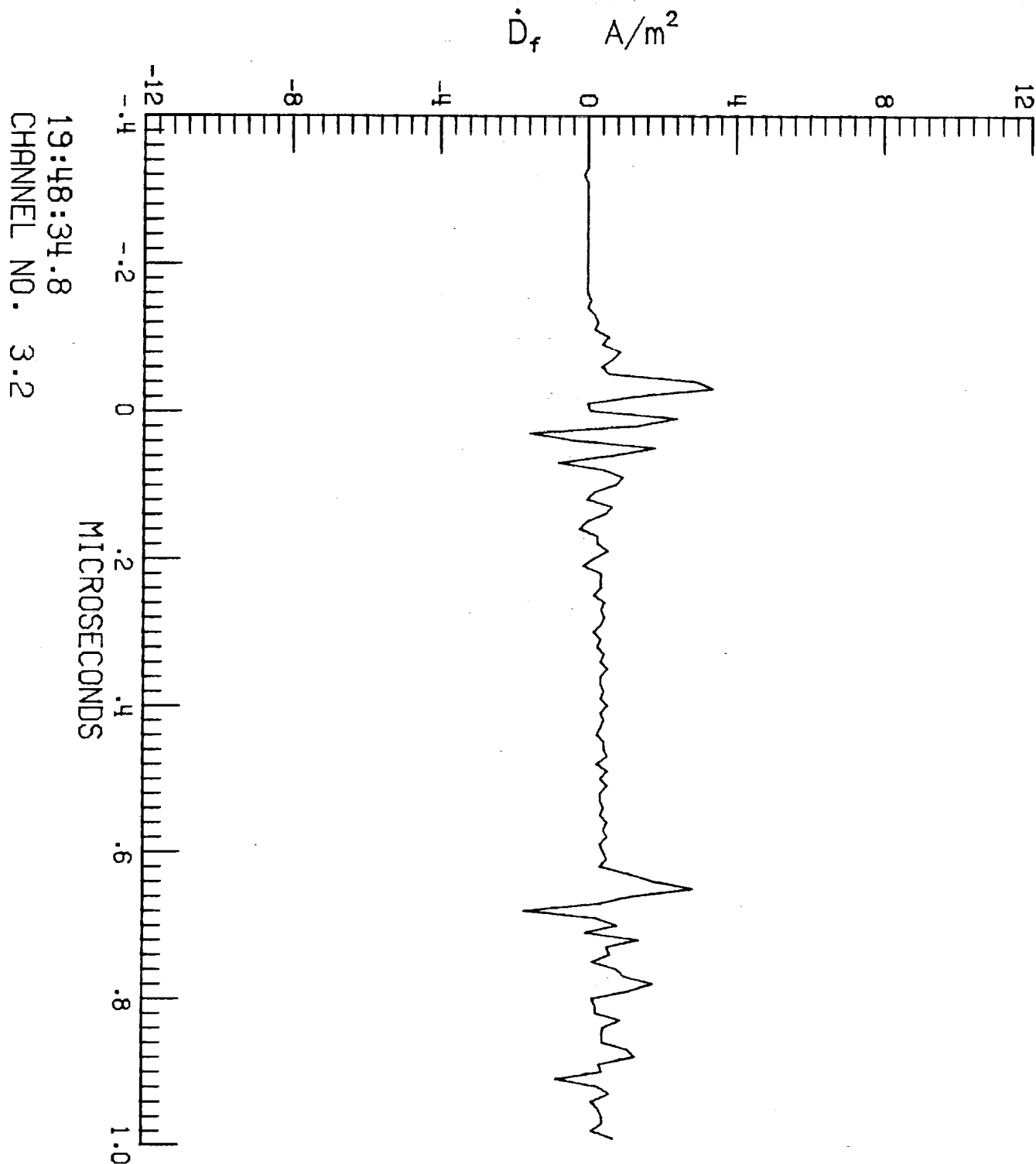


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OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 13

S.057



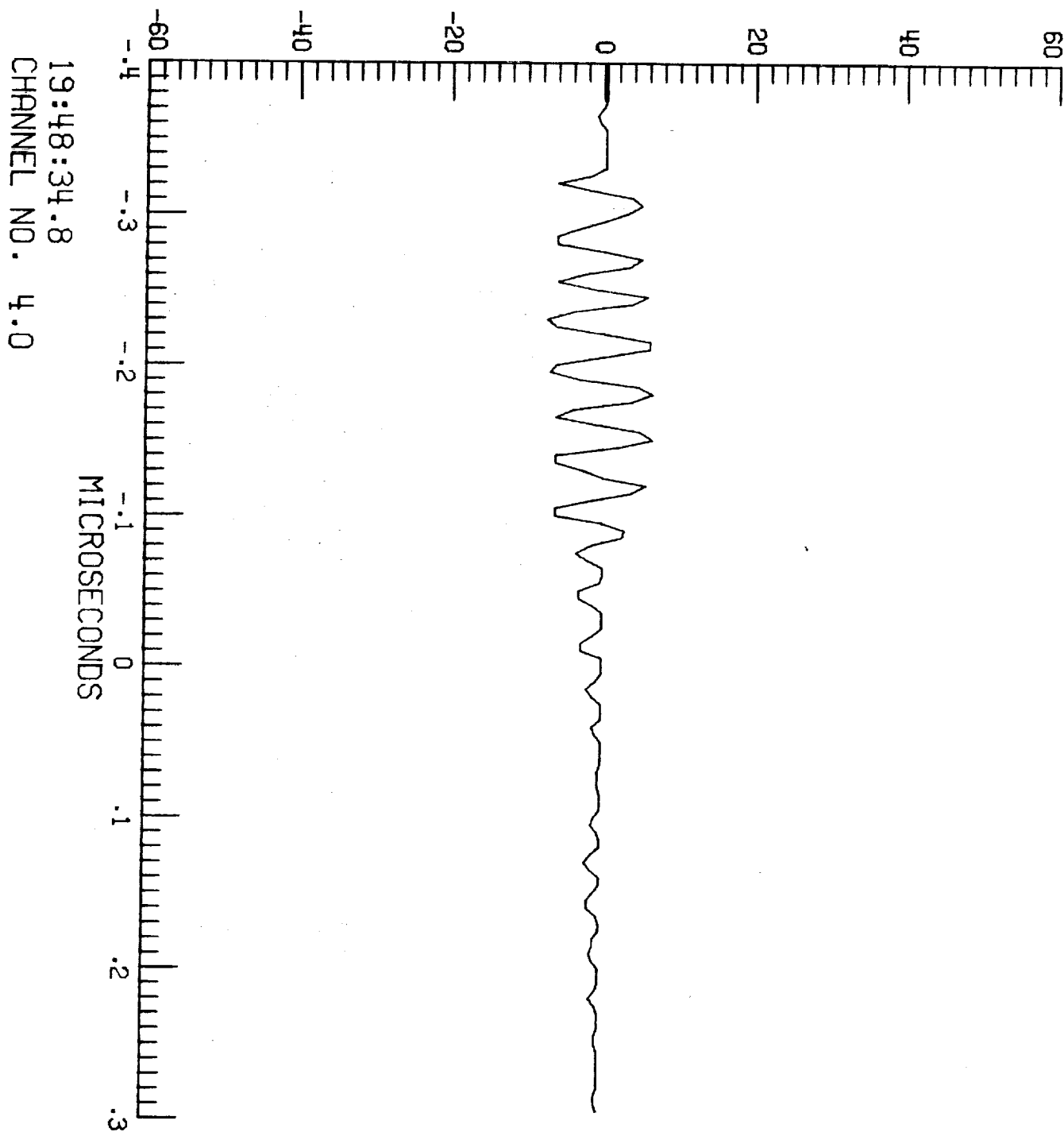
F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 13

S.057

TP 100

V_w V



ORIGINAL PAGE IS
OF POOR QUALITY

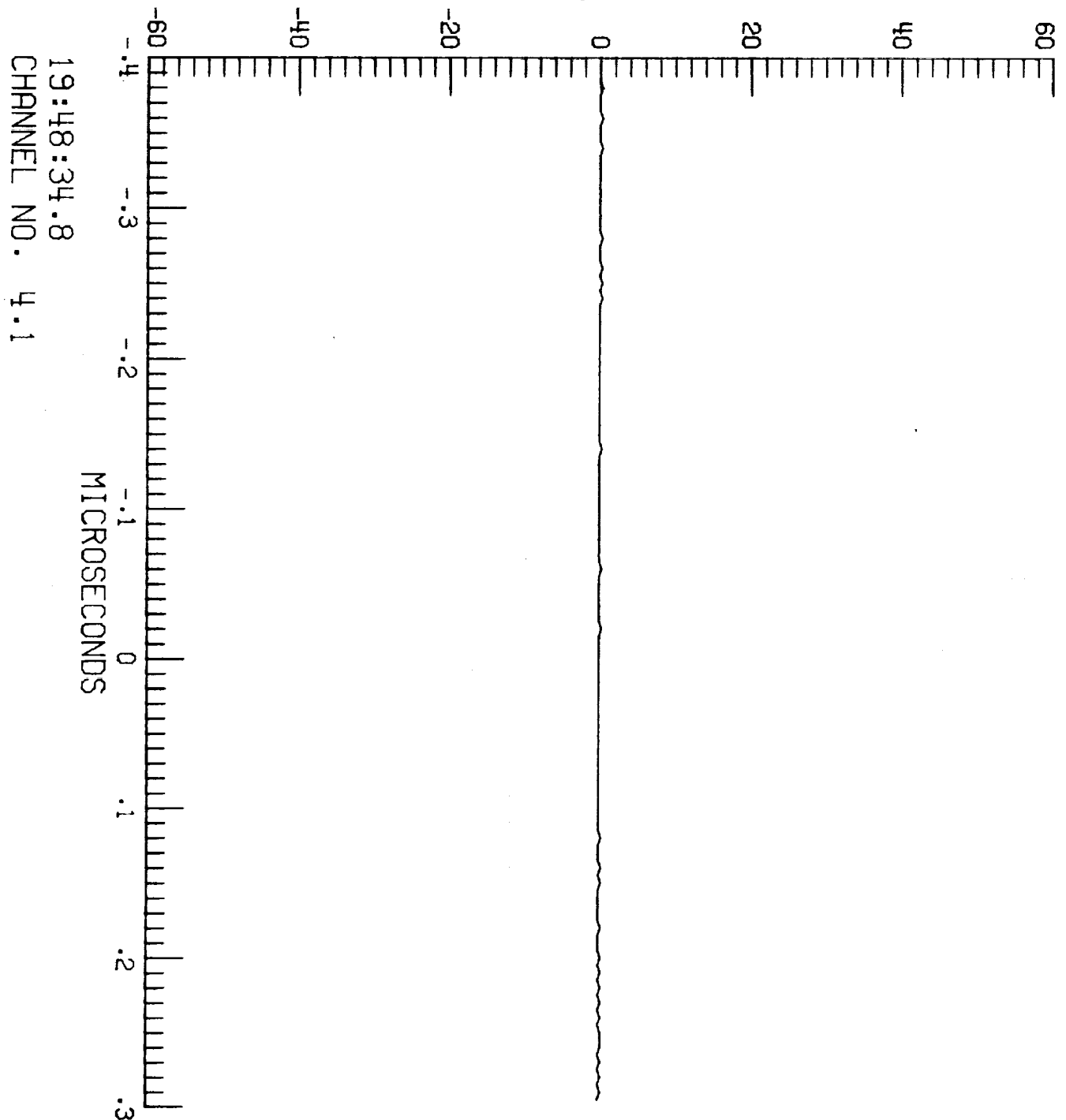
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LEC 4 RUN NO. 13

S.057

TP 101

V_{fb} V

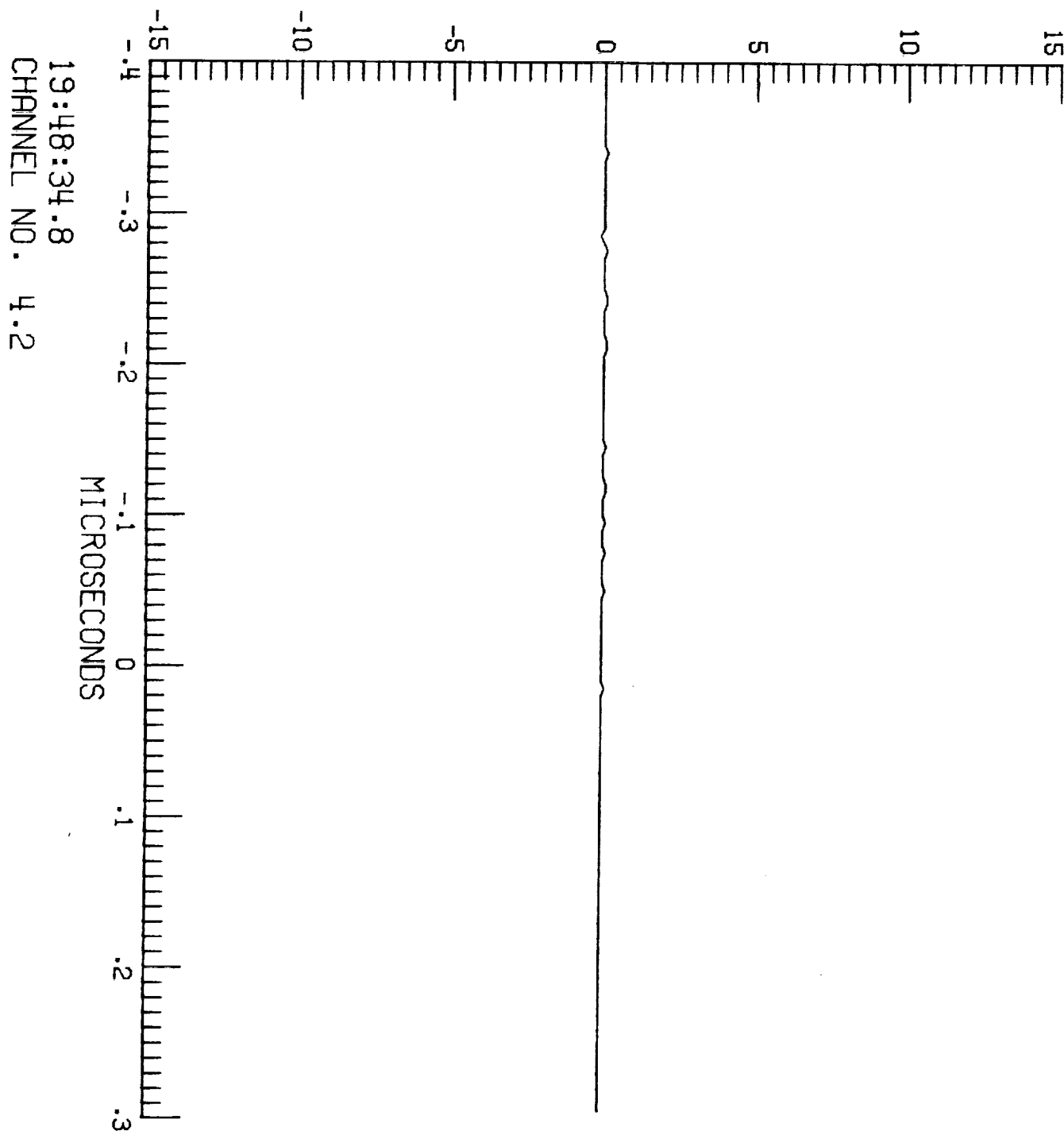


F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 13

S.057

TP123 A



ORIGINAL PAGE IS
OF POOR QUALITY

F-108 LIGHTNING/ 84-037

LEO1 RUN NO. 14

6.058

T_n A

19:48:53.8
CHANNEL NO. 1.1

MICROSECONDS

F-108 LIGHTNING/ 84-037

LEC 1 RUN NO. 14

6.058

I_t A

19:48:53.6
CHANNEL NO. 1.2

MICROSECONDS

10 x 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 14

6.058

$D, A/m^2$

19:48:53.6
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 14

5.058

A/s

24 x 10¹⁰

19:48:53.8
CHANNEL NO. 2.1

MICROSECONDS

908

ORIGINAL PAGE IS
OF POOR QUALITY

E=106 LIGHTNING/ 84-037

LEO 2 RUN NO. 14

3.058

\dot{B}_1 T/s

19:48:53.6
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

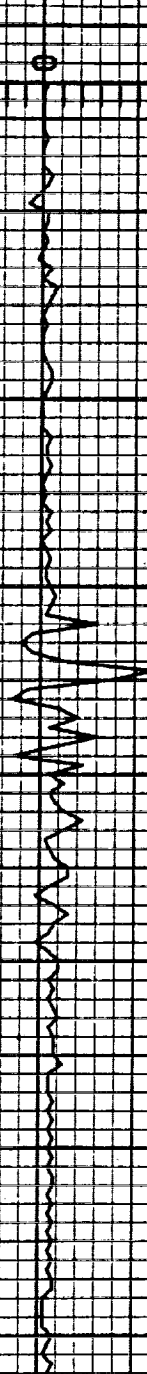
LEC3 RUN NO. 14

6.058

\dot{D}_{wr} A/m²

19:48:53.6
CHANNEL NO. 3.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-057

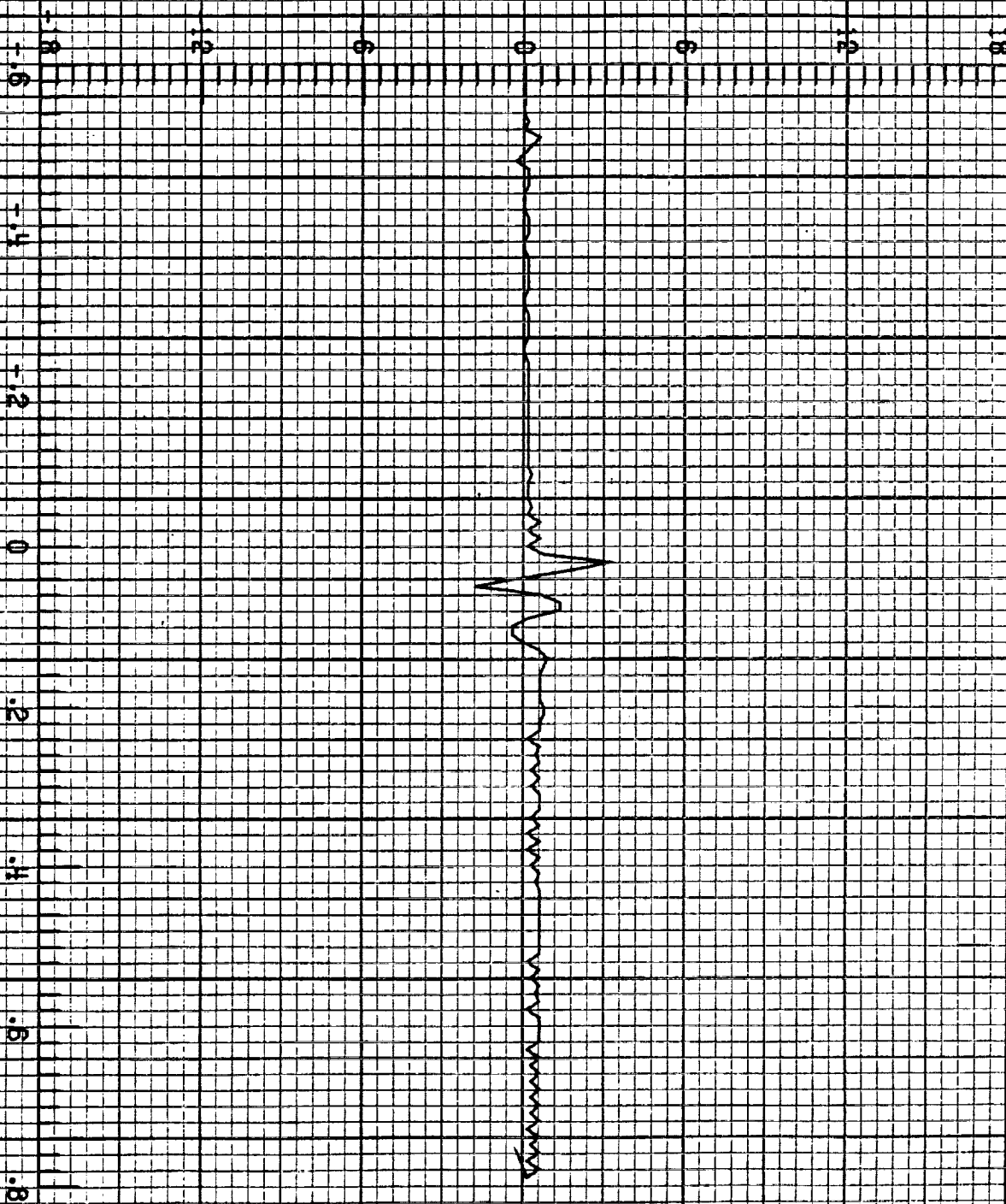
1 EC 3 RUN NO. 14

3.058

\bar{D}_w A/m²

19:48:53.6
CHANNEL NO. 3.1

MICROSECONDS



9-1

F-106 LIGHTNING/ 84-037

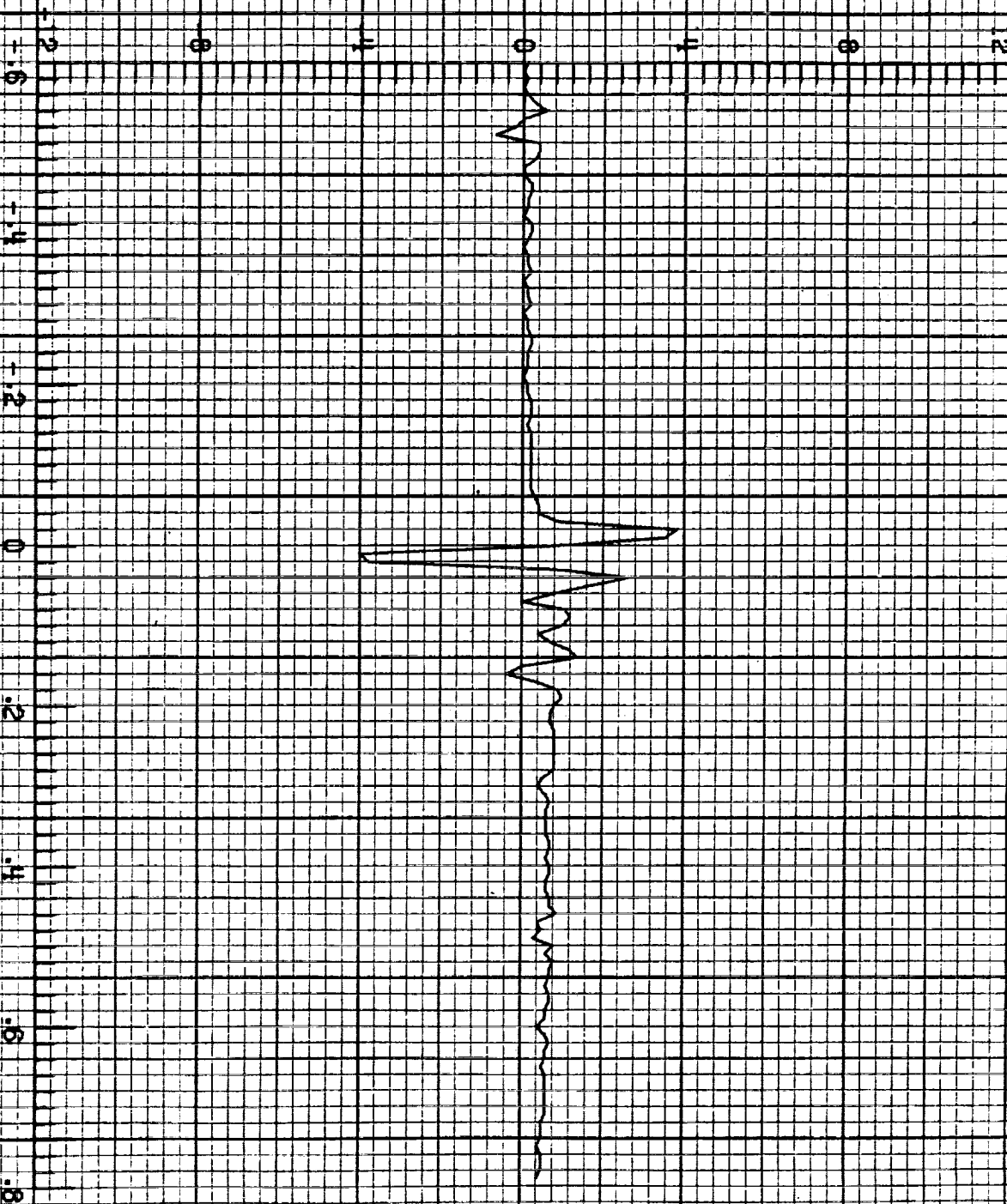
1 EC 3 RUN NO. 14

6.058

\dot{D}_r A/m²

19:48:53.6
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-108 LIGHTNING/ 84-037

LECH RUN NO. 14

6.058

TP 100

V_w V

19:48:53.6
CHANNEL NO. 4.0

MICROSECONDS

E-106 LIGHTNING/ 84-037

LECH RUN NO. 14

S.058

TP 101

V₁₀ V

19:48:53.6
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 14

6.058

TP123 A

19:48:53.6
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 15

6.062

T_n A

19:49:22.9
CHANNEL NO. 1.1

MICROSECONDS

10 X 10³

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 15

5.062

T₁ A

19:48:22.9
CHANNEL NO. 1.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEO2 RUN NO. 15

6.062

D_1 A/m²

19:49:22.9
CHANNEL NO. 2.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

FC2 RUN NO. 15

6.062

\dot{I} A/s

19:49:22.9
CHANNEL NO. 2.1

MICROSECONDS

24 X 10¹⁰

9.9

F-106 LIGHTNING/ 84-037

1 EC2 RUN NO. 15

6.062

\dot{B}_1 T/s

1800
1200
600
0
-600
-1200
-1800

-.3

-.2

-.1

0

.1

.2

.3

.4

MICROSECONDS

19:49:22.9
CHANNEL NO. 2:2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 15

5.062

\dot{D}_{wr} A/m^2

19:49:22.9
CHANNEL NO. 8.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEO3 RUN NO. 15

6.062

\dot{D}_{w1} A/m²

19:49:22.9
CHANNEL NO. 3.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

FC 3 RUN NO. 15

5.062

\dot{D}_r A/m²

19:49:22.9
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

IFC# RUN NO. 15

3.062

TP 100

V_w V

19:49:22.9
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECH RUN NO. 15

6.062

TP 101

V_{fb} V

19:49:22.9
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

1 EC 4 RUN NO. 15

TP123 A

19:49:22.9

CHANNEL NO. 4.2

MICROSECONDS

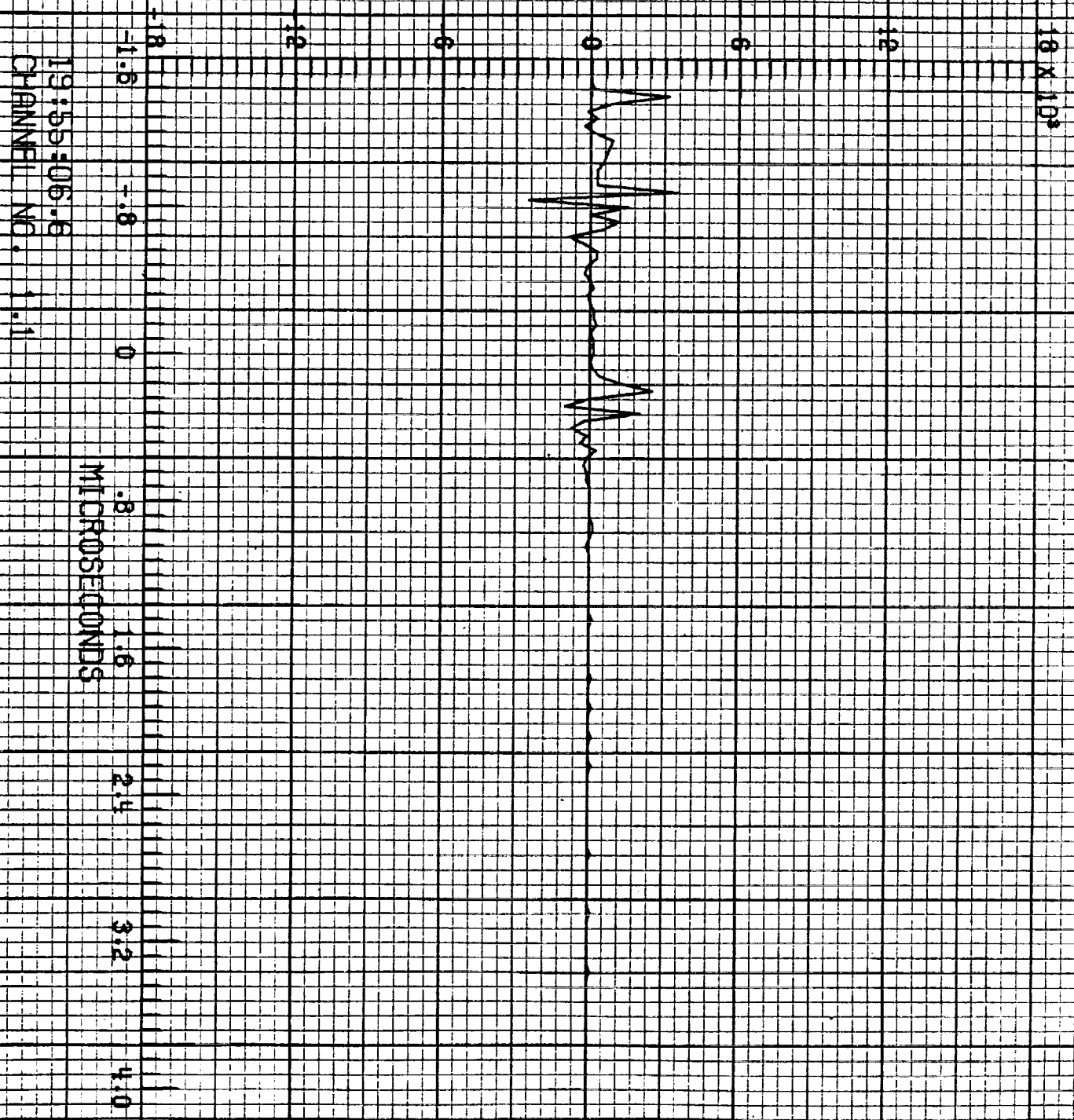
ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 EC1 RUN NO. 16

6.063

I_a A



19:55:06.6
CHANNEL NO. 1.1

F-106 LIGHTNING/ 84-037

1 FC 1 RUN NO. 16

3.063

I_t A

10×10^3

-1.8

-1.6

-1.2

-0.8

-0.4

0.0

0.4

0.8

1.2

MICROSECONDS

19:55:06.8
CHANNEL NO. 1.2

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-037

LEO2 RUN NO. 16

6.063

\dot{D}_1 A/m²

19:55:06.8
CHANNEL NO. 2.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 16

8.063

\dot{I} A/s

24×10^{14}

-24

16

8

8

8

16

-3

-2

-1

0

$.1$

$.2$

$.3$

$.4$

MICROSECONDS

19:55:06.8
CHANNEL NO. 2.1

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 2 RUN NO. 16

6.063

\dot{D}_1 T/s

19:55:06.6
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

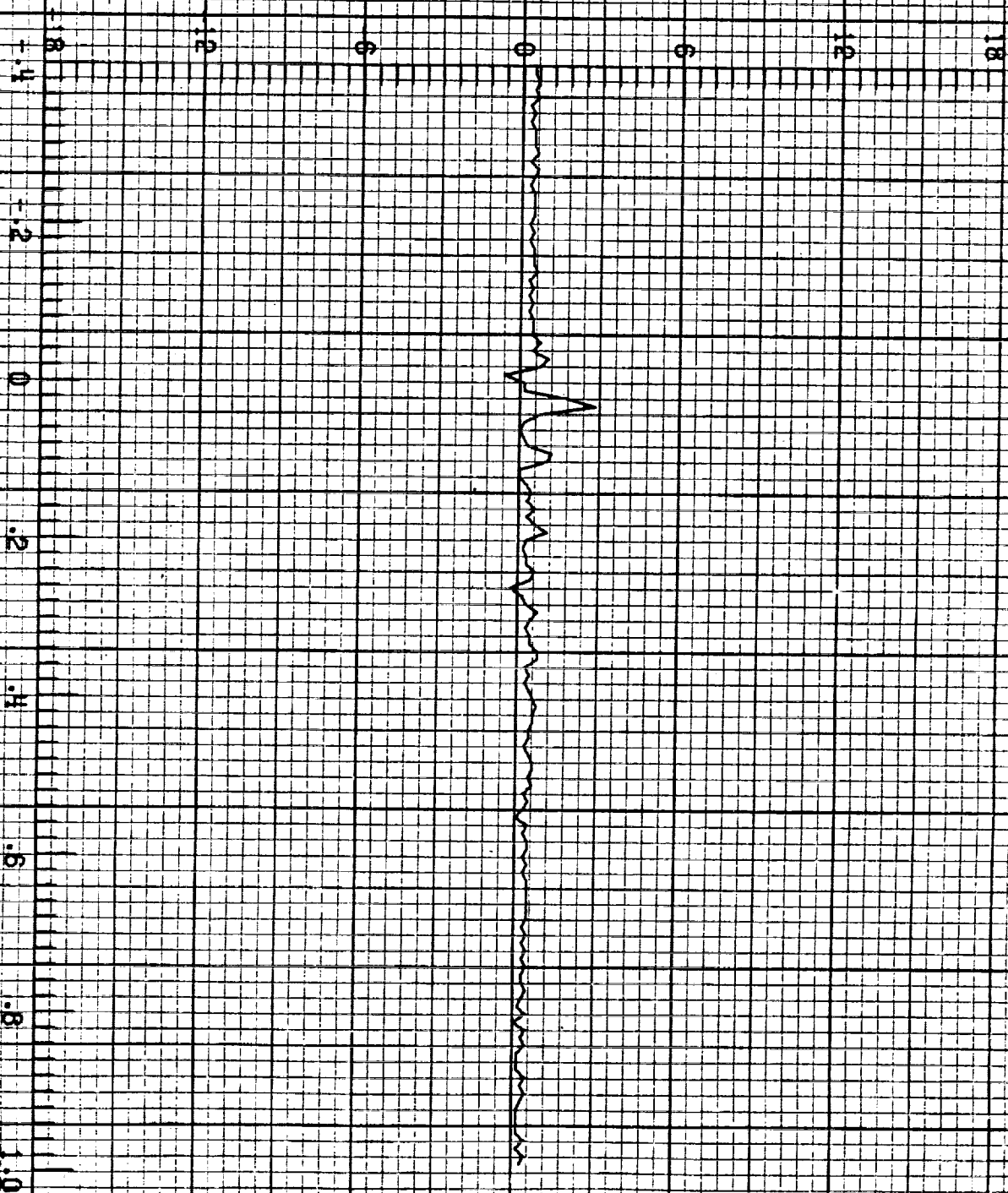
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5.065

\hat{D}_{wr} A/m²

19:55:06.8
CHANNEL NO. 3.0

MICROSECONDS



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F-106 LIGHTNING/ 84-037

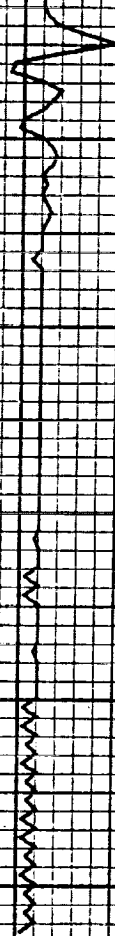
LECS RUN NO. 16

6.063

\hat{D}_w A/m²

19:55:06.6
CHANNEL NO. 3.1

MICROSECONDS



F-106 LIGHTNING/ 84-037

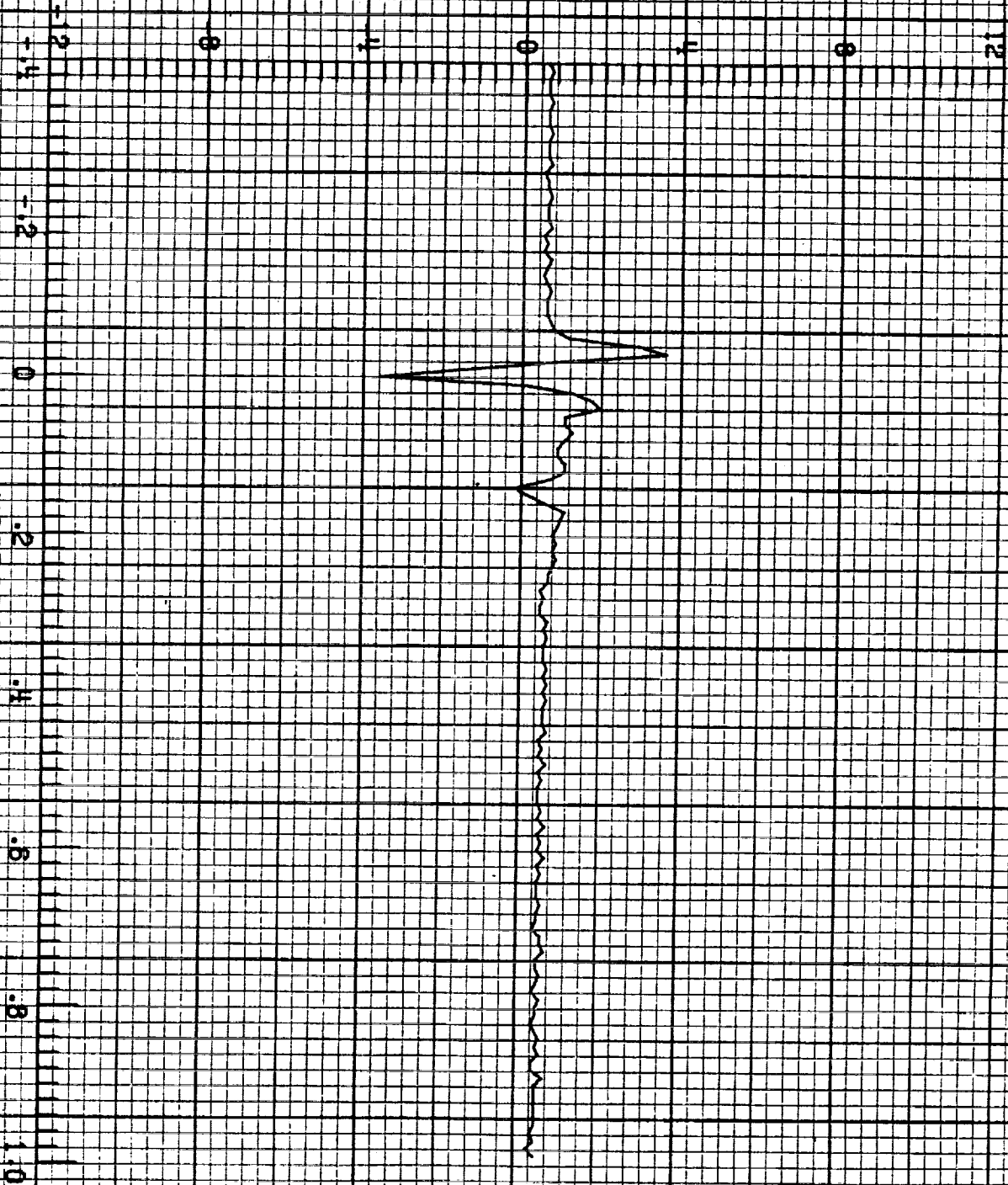
LEC 3 RUN NO. 16

6.066

D_r A/m²

19:55:06.8
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-037

LFC 4 RUN NO. 16

S.063

TP 100

V_w V

19:55:06.6
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 16

6.063

TP 101

V_{fb}

V

19:55:06.8
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECH RUN NO. 16

S.063

TP123 A

19:55:06.6
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

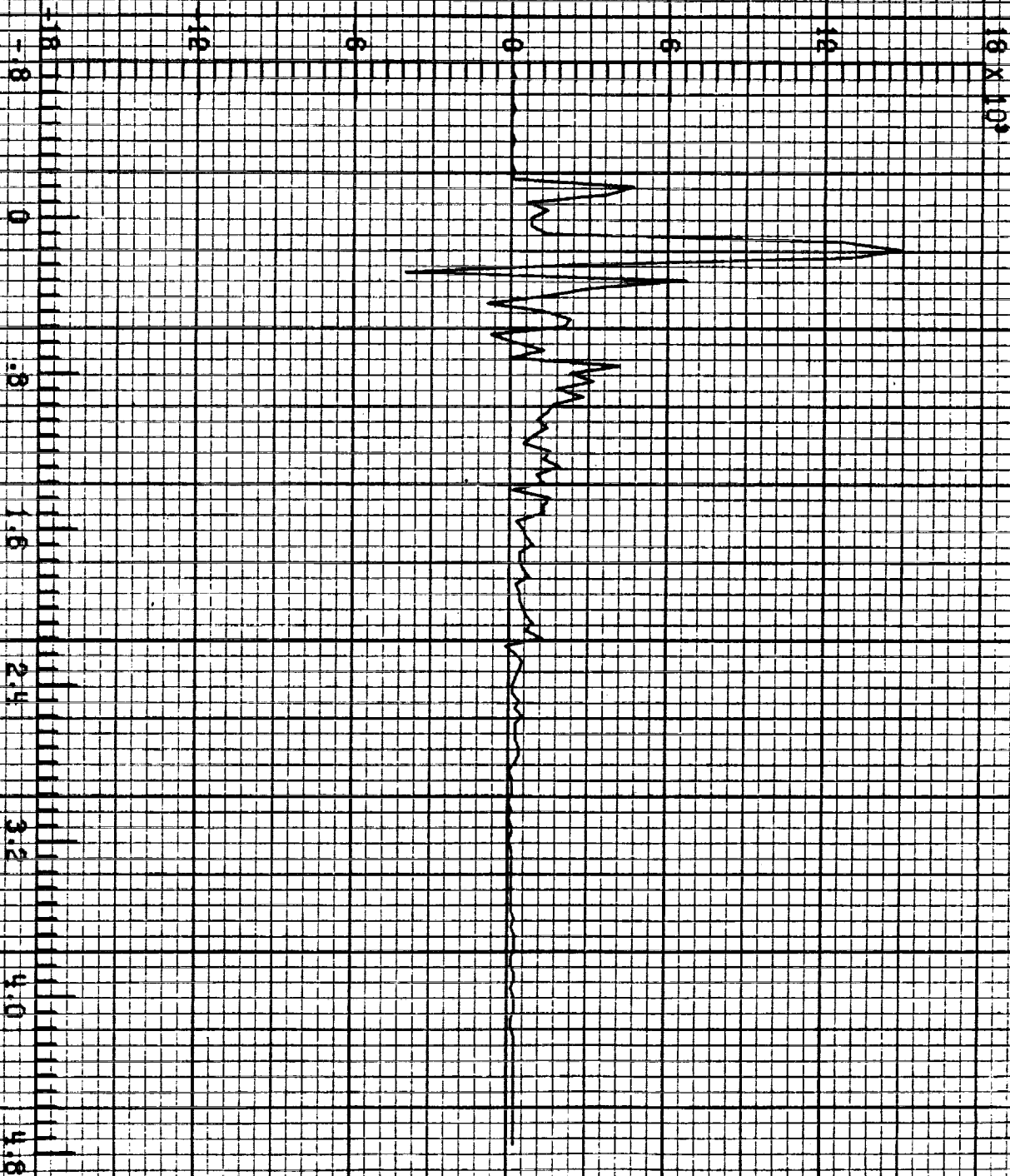
LEC 1 RUN NO. 17

6.066

I_n A

19:55:26.3
CHANNEL NO. 1.1

MICROSECONDS



ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-037

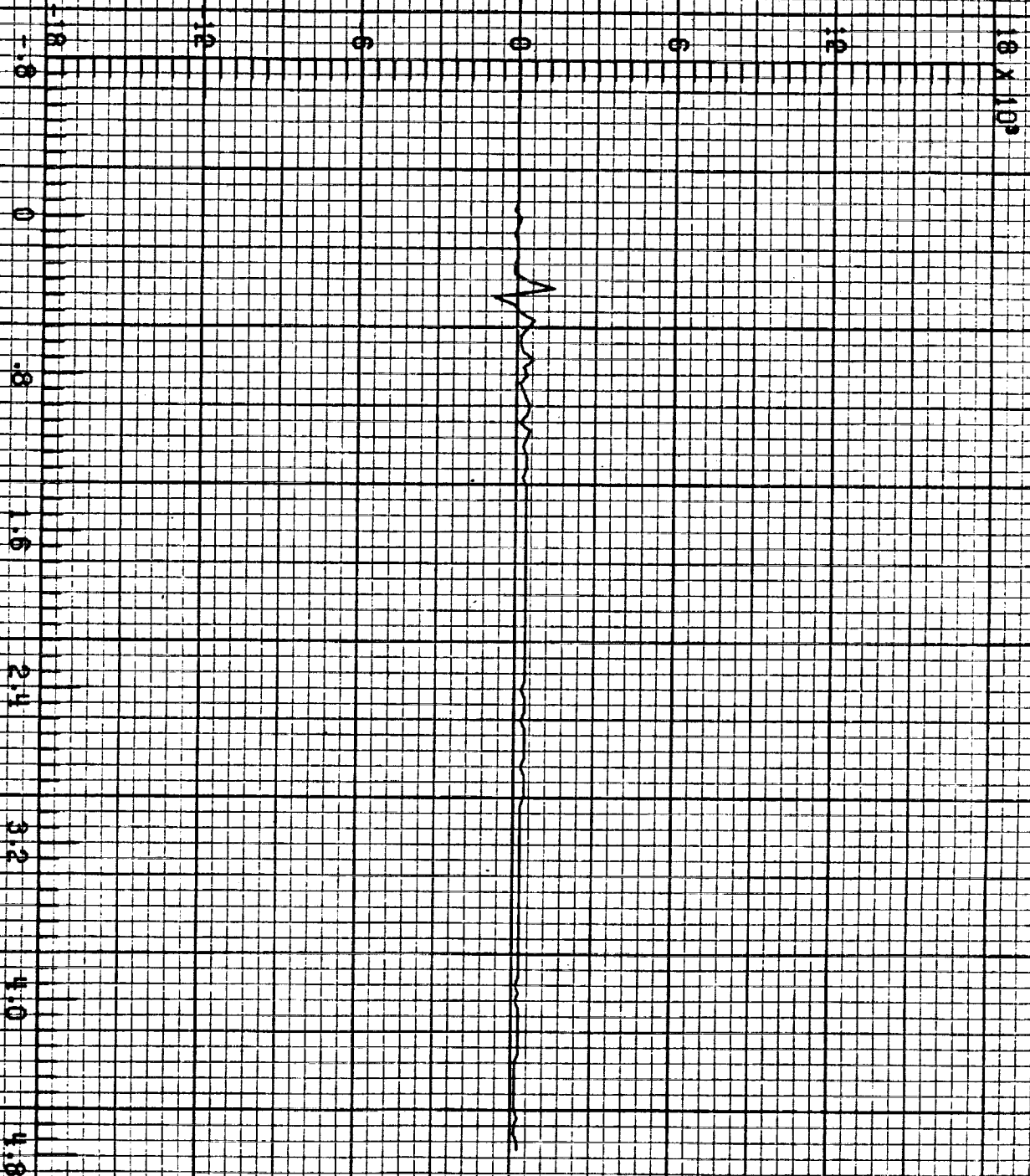
LEC 1 RUN NO. 17

5.068

I, A

19:55:26.3
CHANNEL NO. 1.2

MICROSECONDS



F-106 LIGHTNING/ 84-037

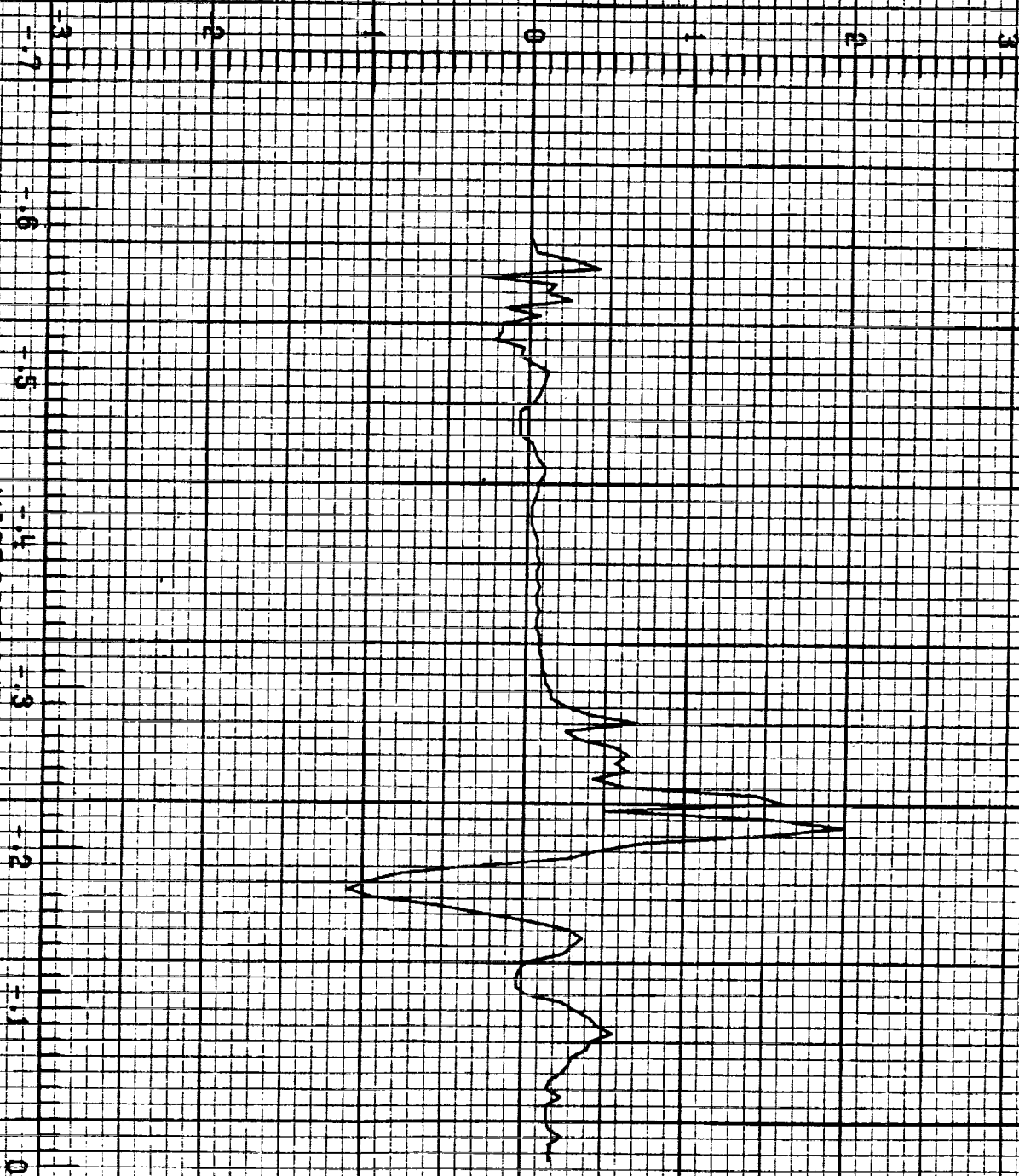
LEC 2 RUN NO. 17

6.066

D_t A/m^2

19:55:26.3
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 17

S.066

I A/s

19:55:26.3
CHANNEL NO. 2.1

MICROSECONDS

24 x 10¹⁰



F-106 LIGHTNING/ 84-037

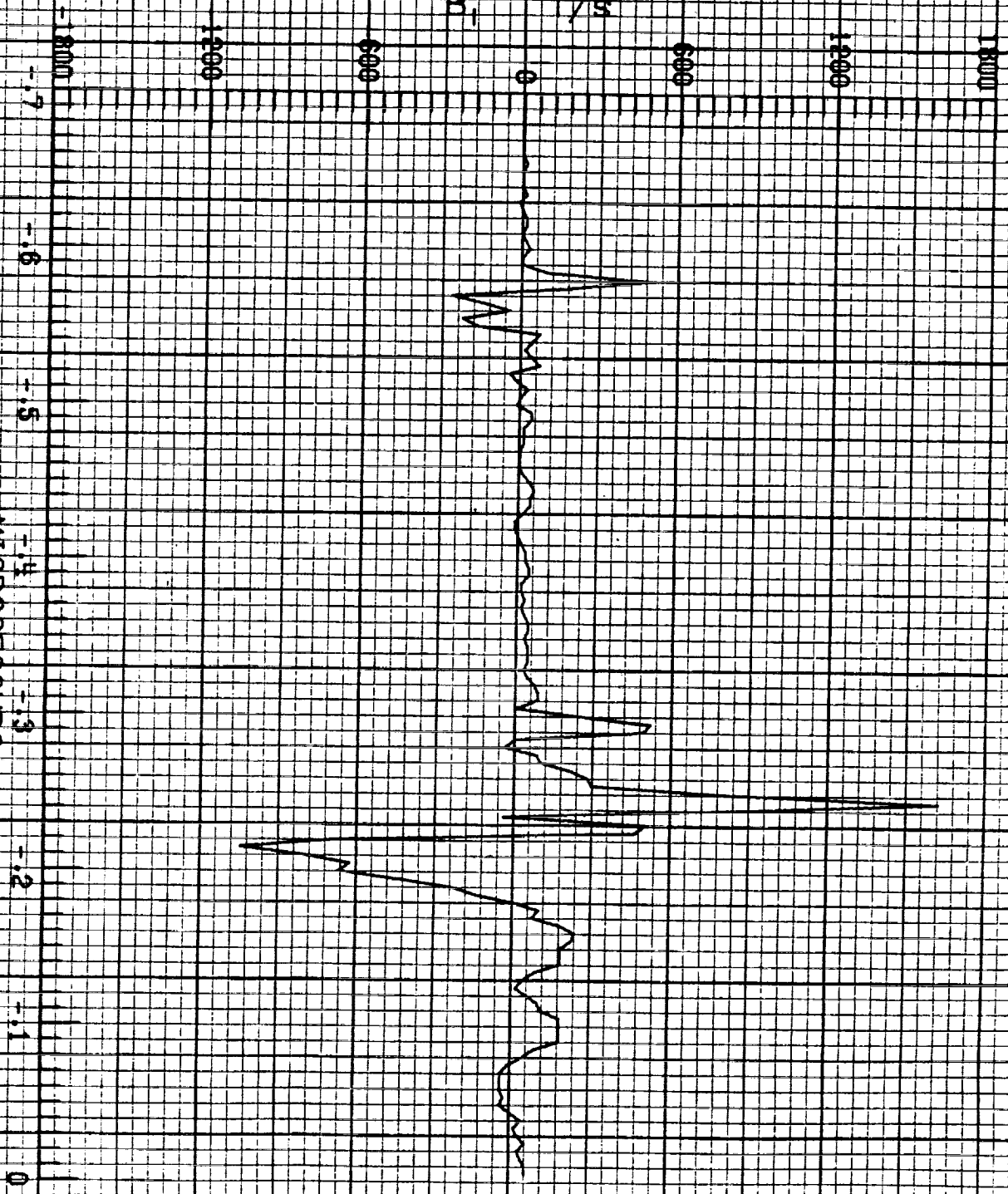
LEC 2 RUN NO. 17

6.066

\hat{B}_1 T/s

19:55:26.3
CHANNEL NO. 2.2

MICROSECONDS



ORIGINAL PAGE IS
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F-106 LIGHTNING/ 84-037

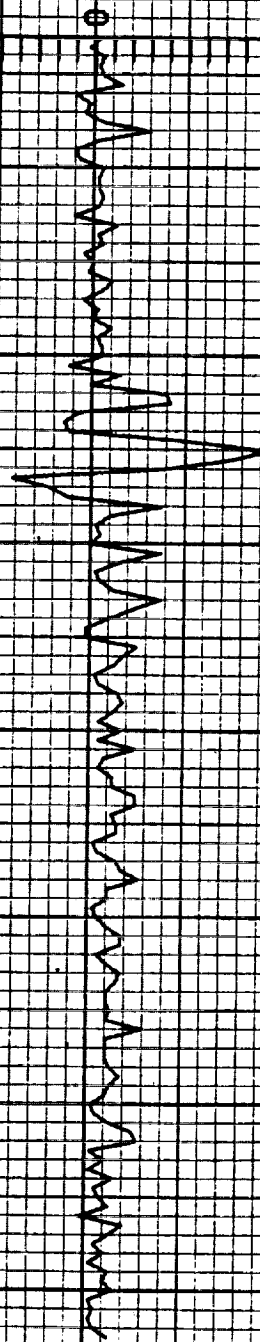
LECS RUN NO. 17

5.066

\dot{D}_{wr} A/m²

19:55:26.3
CHANNEL NO. 3.0

MICROSECONDS



F-106 LIGHTNING/ 84-037

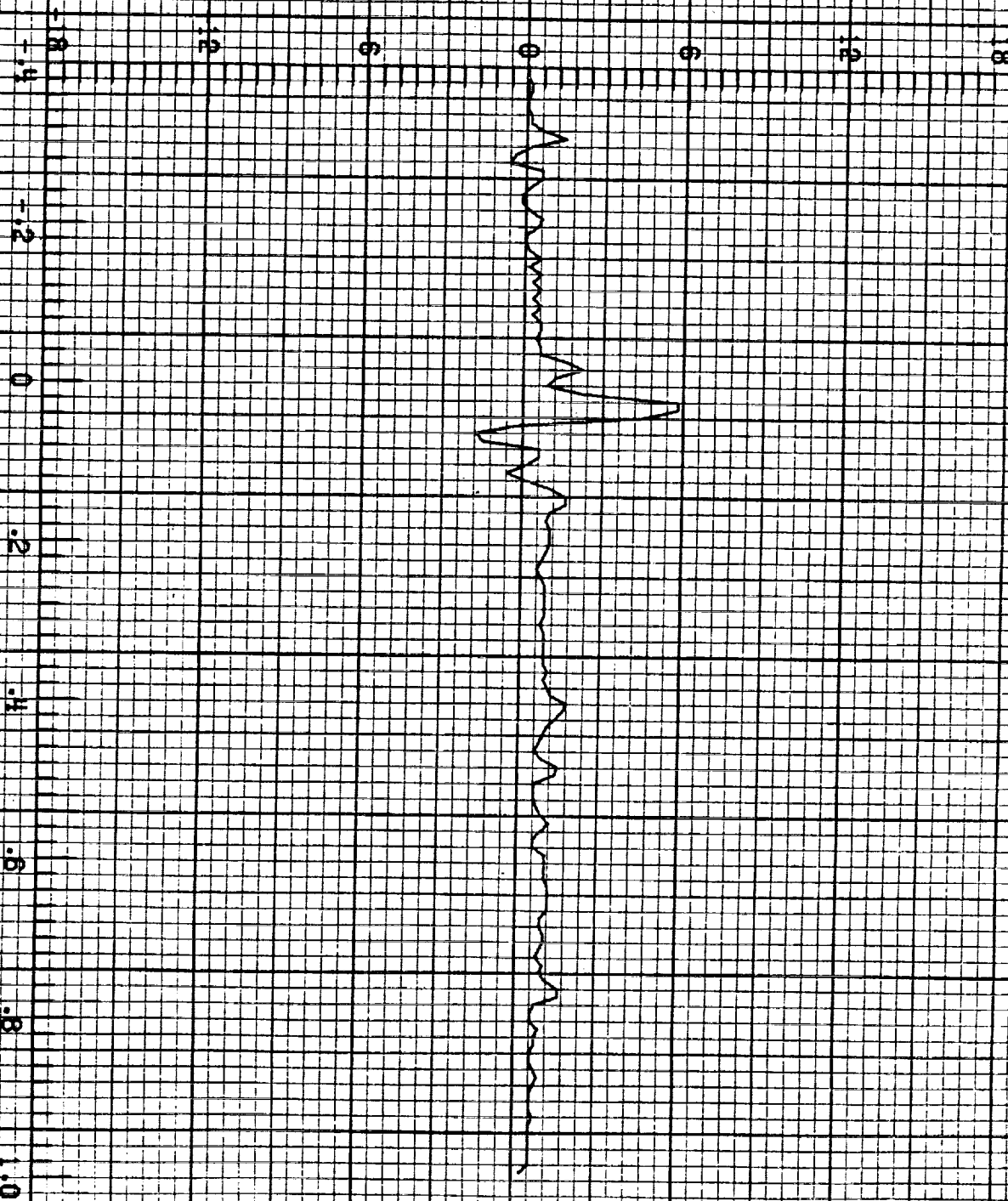
LECS RUN NO. 17

8.066

\dot{D}_w A/m²

19:59:26.3
CHANNEL NO. 3.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 17

5.066

\dot{D}_r A/m²

119:55:26.3
CHANNEL NO. 3.2

MICROSECONDS

F-106 LIGHTNING/ 84-057

IFC 4 RUN NO. 17

3.066

TP 100

V_w V

19:55:26.3
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 17

6.066

TP 101

V_{10} V

19:50:26.3
CHANNEL NO. 4.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LECH RUN NO. 17

0.066

TP123

A

-15 -10 -5 0 5 10 15

-1.7

-1.6

-1.5

-1.4

-1.3

-1.2

-1.1

0

MICROSECONDS

19:55:26.3
CHANNEL NO. 4.2

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

RUN NO. 18

6.07G

I_n A

19:56:36.9
CHANNEL NO. 1.1

MICROSECONDS



F-106 LIGHTNING/ 84-037

LEO 1 RUN NO. 18

6.070

I_t A

1.8 x 10³

19:58:36.9
CHANNEL NO. 1.2

MICROSECONDS

1.8
1.6
1.4
1.2
1.0
.8
.6
.4
.2
0
-.2
-.4
-.6
-.8
-1.0
-1.2
-1.4
-1.6
-1.8

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

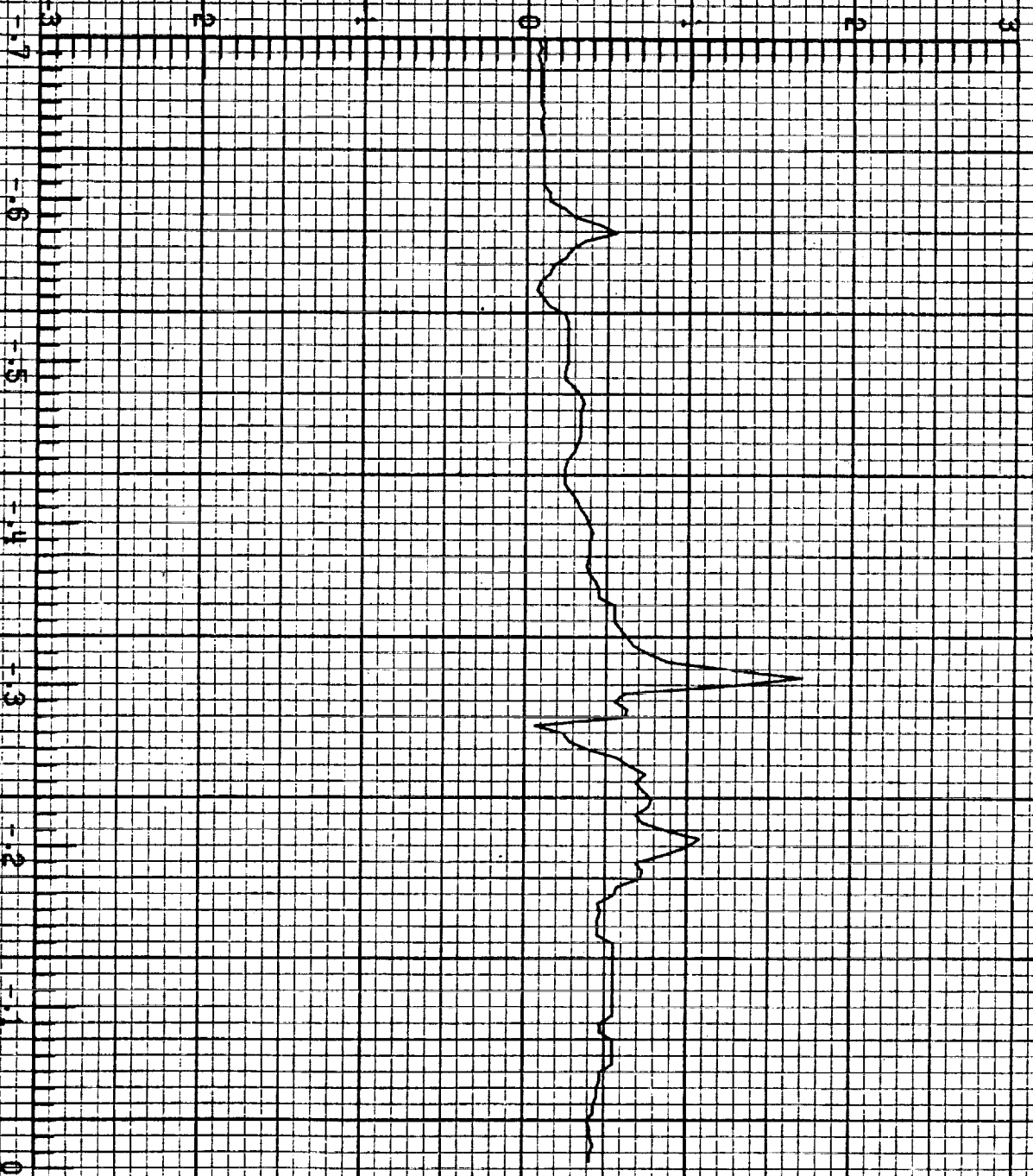
LEC 2 RUN NO. 18

S.070

D_t A/m²

19:56:36.9
CHANNEL NO. 2.0

MICROSECONDS



E-106 LIGHTNING/ 84-037

IFC 2 RUN NO. 18

6.070

i A/s

24 x 10¹⁰

19:56:36.9
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F=106 LIGHTNING/ 84-097

IFC2 RUN NO. 18

3.070

\hat{B}_1

$\tau/5$

19:56:36.9
CHANNEL NO. 2.2

MICROSECONDS

958

F-106 LIGHTNING/ 84-037

LEC3 RUN NO. 18

6.070

\hat{D}_{wr} A/m²

19:56:36.9
CHANNEL NO. 3.C

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 3 RUN NO. 18

6.070

\dot{D}_w A/m²



F-106 LIGHTNING/ 84-037

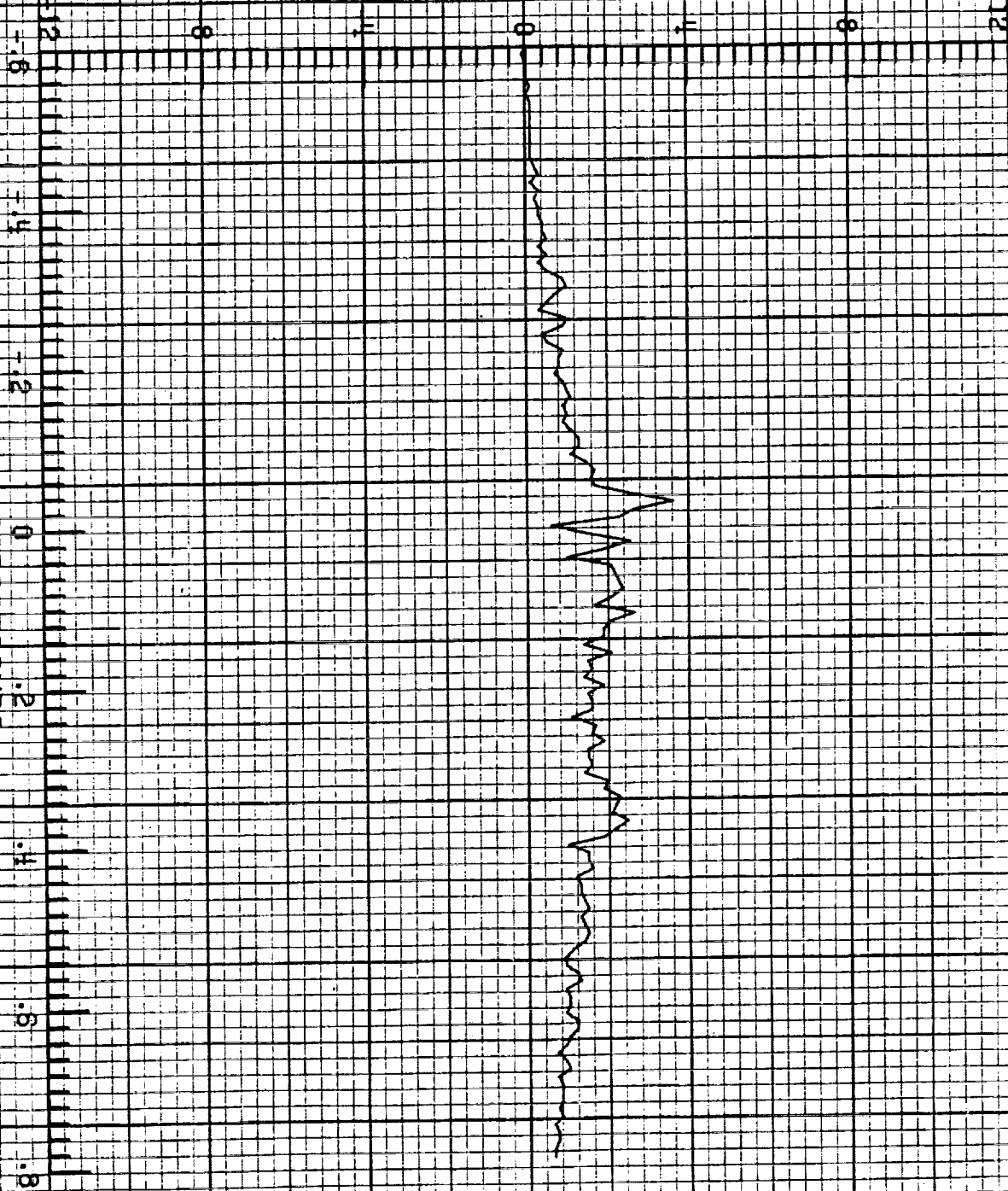
LEC 3 RUN NO. 18

S.070

\dot{D}_r A/m²

19:56:36.9
CHANNEL NO. 3.2

MICROSECONDS



ORIGINAL PAGE 18
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LEC 4 RUN NO. 18

S.070

TP 100

V_w V

19:56:36.9
CHANNEL NO. 4.0

MICROSECONDS

957

F-106 LIGHTNING/ 84-037

LECH RUN NO. 18

S.070

TP 101

V_{fb} V

19:56:36.9
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

E-106 LIGHTNING/ 84-037

LEO 4 RUN NO. 18

6.070

TP123 A

19:56:36.9
CHANNEL NO. 4.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

IFC1 RUN NO. 10

0.071

I₁ A

19:57:44.6
CHANNEL NO. 1.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LFC 1 RUN NO. 19

6.071

T_t A

19:57:44.6
CHANNEL NO. 1.2

MICROSECONDS

1.8×10^3

F-106 LIGHTNING/ 84-037

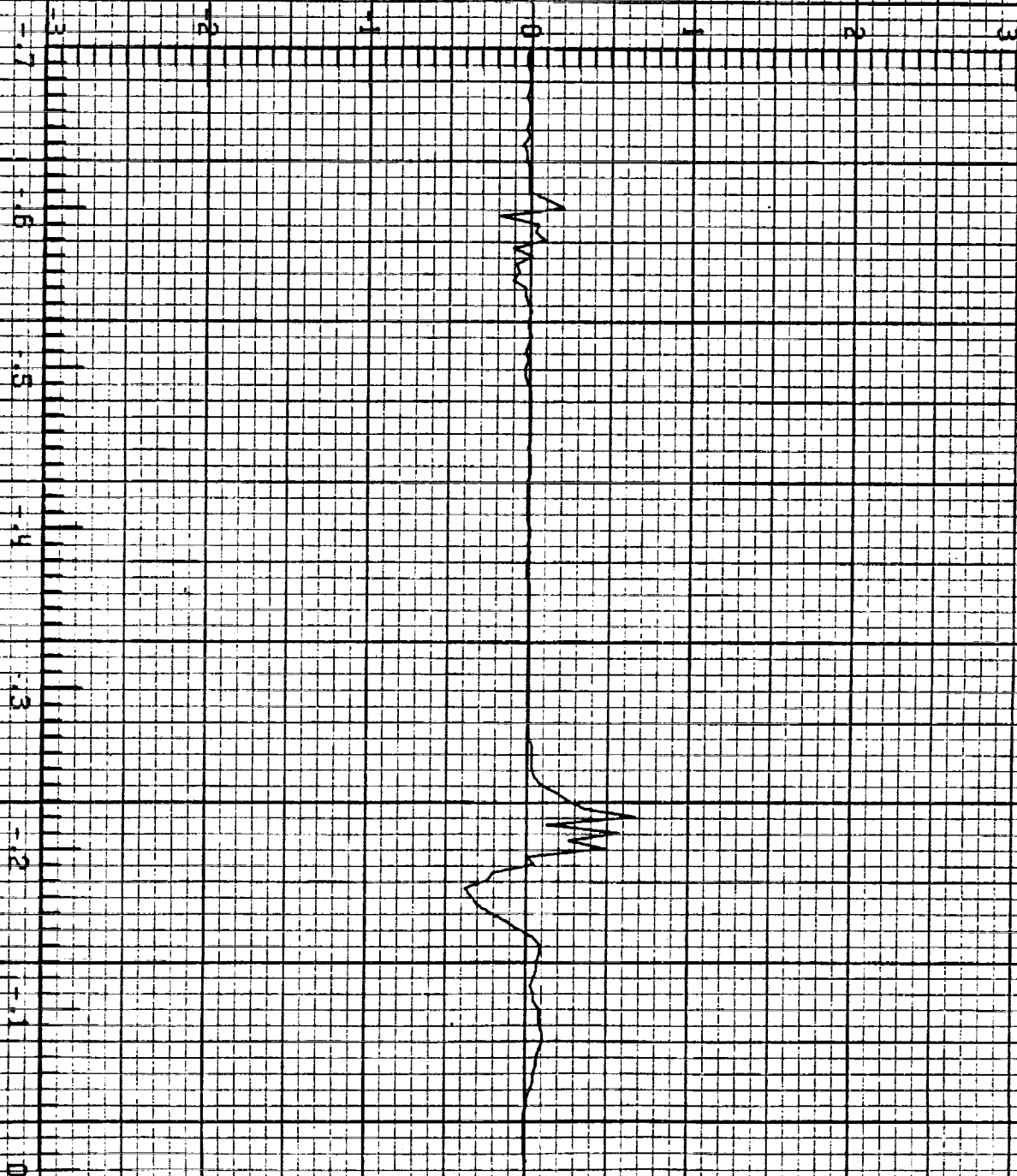
JFC2 RUN NO. 19

6.071

\dot{D}_t A/m²

19:57:44.6
CHANNEL NO. 2.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 EC 2 RUN NO. 19

6.071

\dot{I} A/s

19:57:44.6
CHANNEL NO. 2.1

24 x 10¹⁰

MICROSECONDS

F-106 LIGHTNING/ 84-037

LEC 2 RUN NO. 19

6.071

B_1 T/s

19:57:44.6
CHANNEL NO. 2.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

IEC 3 RUN NO. 19

6.071

\hat{D}_{wr} A/m^2

19:57:44.8
CHANNEL NO. 3.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

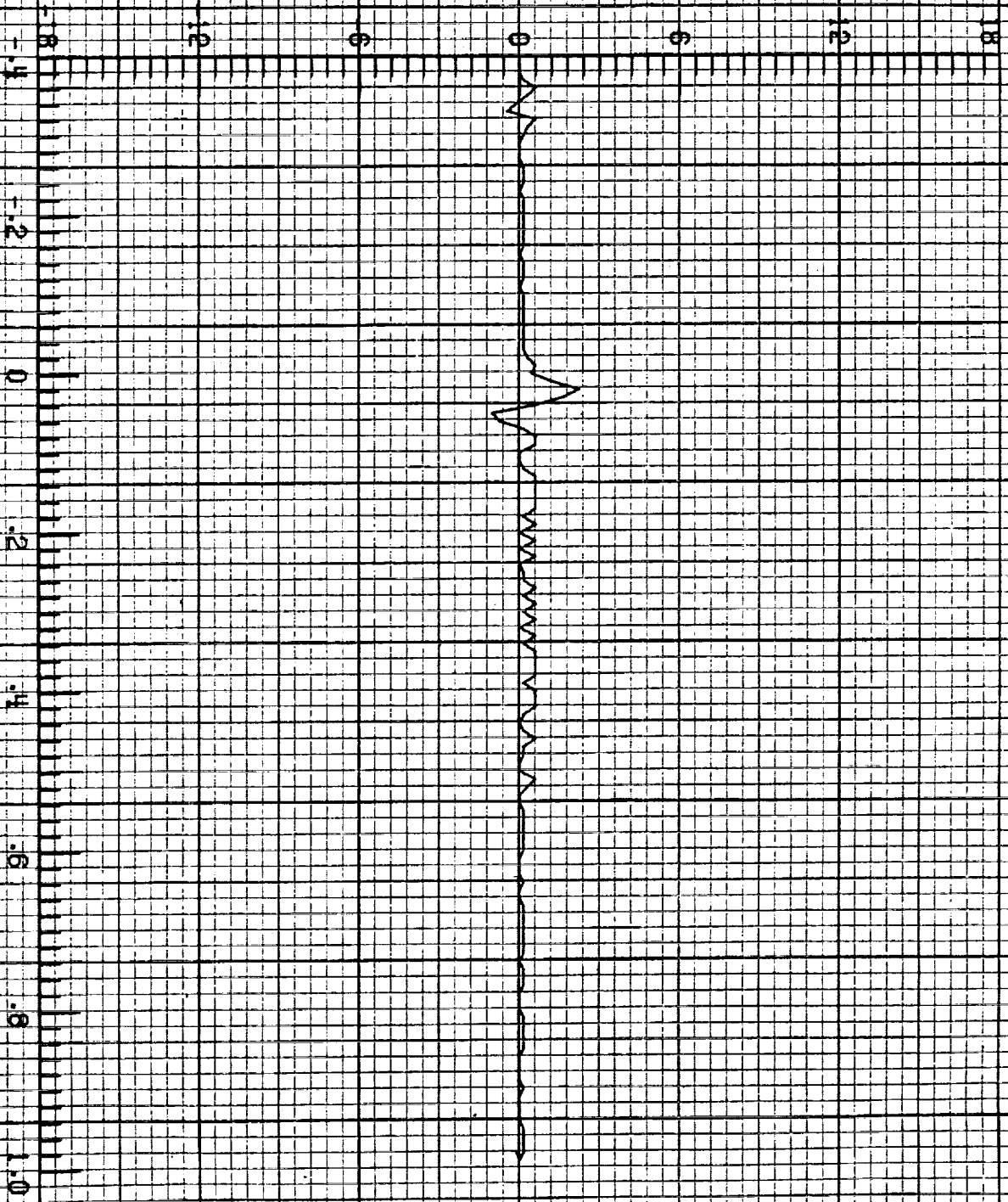
LEC 3 RUN NO. 19

6.071

\dot{D}_{wl} A/m²

19:57:44.6
CHANNEL NO. 3.1

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

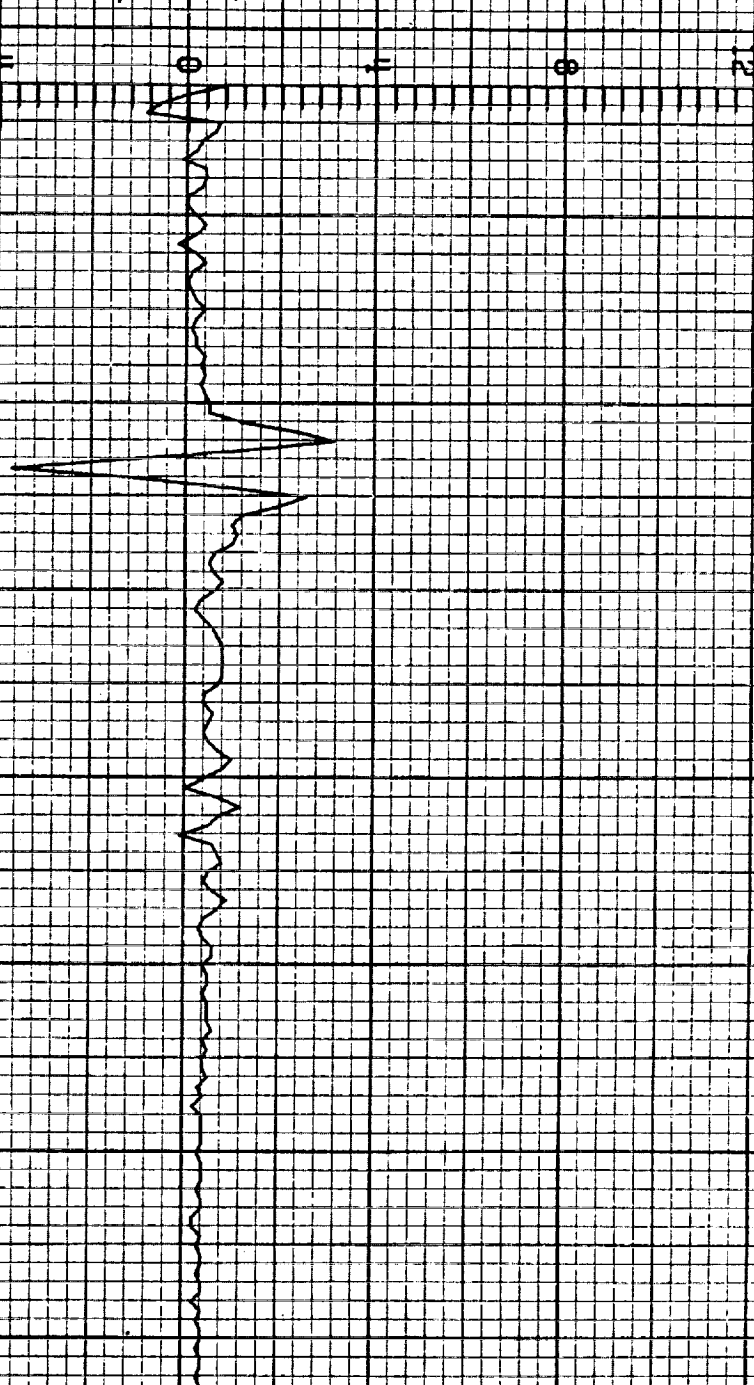
IFCS RUN NO. 19

5.071

\dot{D}_r A/m²

19:57:44.6
CHANNEL NO. 3.2

MICROSECONDS



F-106 LIGHTNING/ 84-037

LFCH RUN NO. 19

6.071

TP 100

V_w V

19:5744.8
CHANNEL NO. 4.0

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

IFC4 RUN NO. 19

6.071

TP 101

V_{fb}

V

19:57:44.6
CHANNEL NO. 4:1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LECH RUN NO. 13

6.071

TP123 A

19:57:44.6
CHANNEL NO. 4.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

IFC1 RUN NO. 20

5.072

I_n A

19:58:19.2
CHANNEL NO. 1.1

MICROSECONDS

10 X 10³

F-106 LIGHTNING/ 84-037

IFC 1 RUN NO. 20

6.072

I, A

19:58:19.2
CHANNEL NO. 1.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

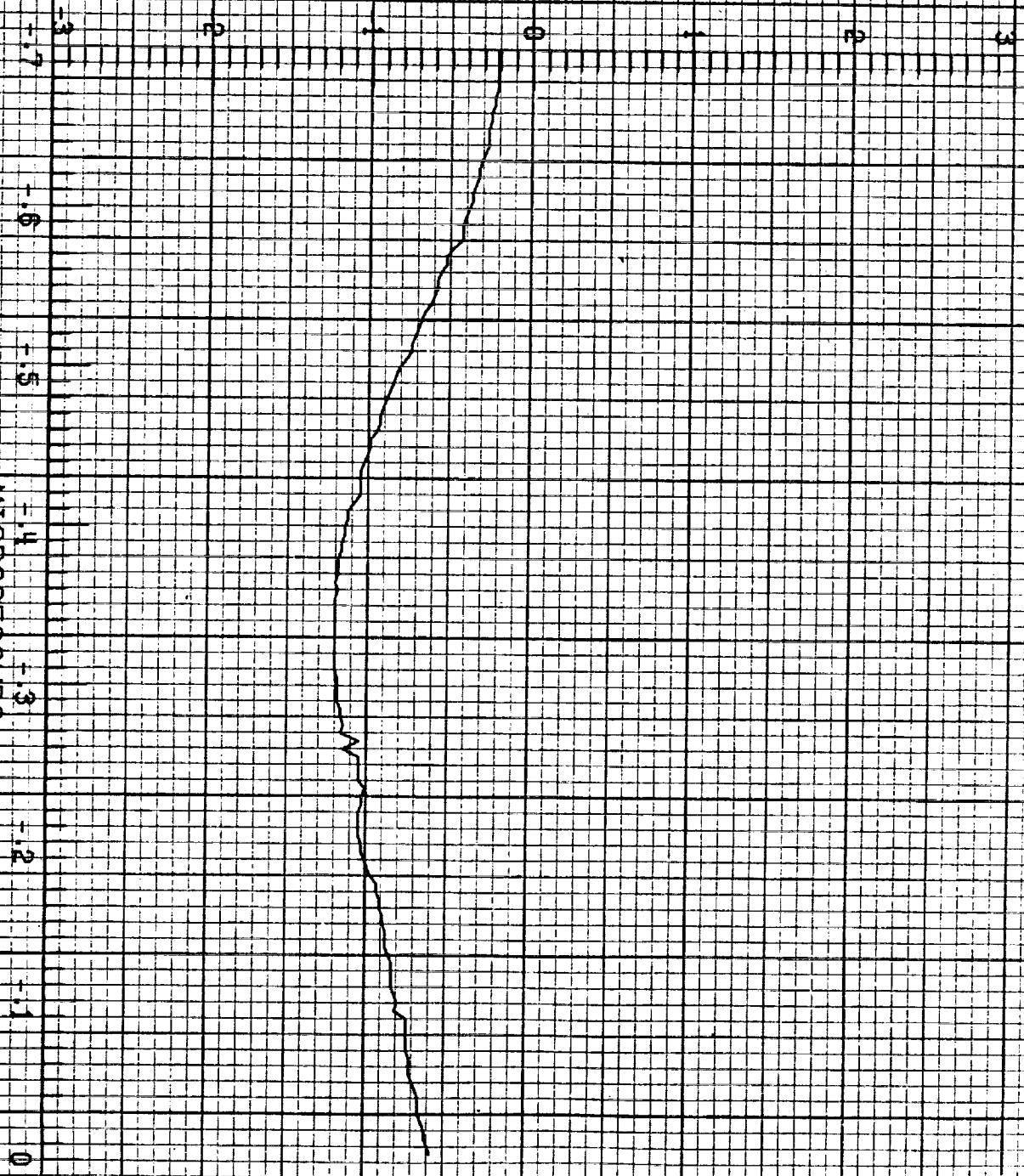
FC 2 RUN NO. 20

5.072

D_t A/m²

19:58:19.2
CHANNEL NO. 2:0

MICROSECONDS



F-106 LIGHTNING/ 84-037

1 FC 2 RUN NO. 20

6.072

\dot{I} A/s

24 X 10¹⁴

19:58:19.2
CHANNEL NO. 2.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 2 RUN NO. 20

5.072

\dot{B}_1 T/s

19:58:19.2
CHANNEL NO. 2.2

MICROSECONDS

F-106 LIGHTNING/ 84-037

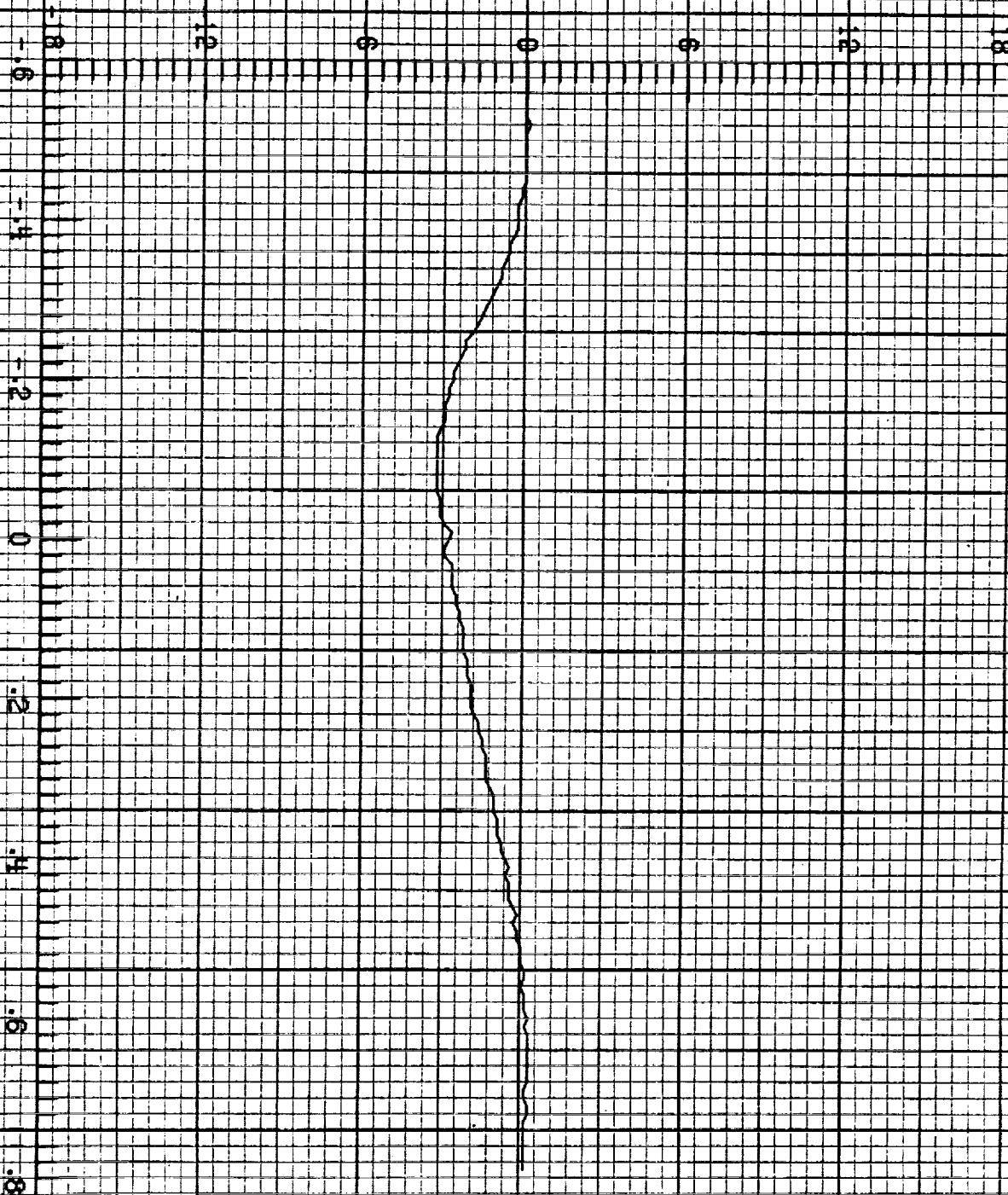
LECS RUN NO. 20

6.072

\hat{D}_{wr} A/m²

19:58:19.2
CHANNEL NO. 3.0

MICROSECONDS



ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

IFC.3 RUN NO. 20

S.072

\hat{D}_w A/m²

19:58:19.2
CHANNEL NO. 3.1

MICROSECONDS

F-106 LIGHTNING/ 84-037

LECS RUN NO. 20

S.072

D_r A/m²

19:58:19.2
CHANNEL NO. 8.2

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

1 FC 4 RUN NO. 20

6.072

TP 100

V_w V

19:58:19.2
CHANNEL NO. 4.0

MICROSECONDS

F-106 LIGHTNING/ 84-037

IFC4 RUN NO. 20

6.072

TP 101

V_{fb} V

19:58:19.2
CHANNEL NO. 4.1

MICROSECONDS

ORIGINAL PAGE IS
OF POOR QUALITY

F-106 LIGHTNING/ 84-037

LECH RUN NO. 20

6.072

TP123

A

19:58:19.2
CHANNEL NO. 4.2

1.1 CRUSSECONDS



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16. Abstract Data waveforms are presented which were obtained during the 1984 direct-strike lightning tests utilizing the NASA F106-B aircraft specially instrumented for lightning electromagnetic measurements. The aircraft was operated in the vicinity of the NASA Langley Research Center, Hampton, Virginia, in a thunder-storm environment to elicit strikes. Electromagnetic field data and conduction currents on the aircraft were recorded for attached lightning.					
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